

APPENDIX C:
ARBORIST REPORTS





March 17, 2022

Prepared for: City of Cupertino

ATTN: Gian Martire

City of Cupertino

10300 Torre Avenue

Cupertino, CA 95014

Re: Arborist Report Peer Review 1655 S De Anza: City of Cupertino

Scope of Work:

The City of Cupertino has contracted West Coast Arborists Inc. (WCA) for arborist services. In March 2021, the City requested a tree removal report review by ISA Certified Arborist Jennifer Tso for 55 trees at or directly adjacent to 1655 S De Anza Blvd. in Cupertino, CA. The City provided address information, an Arborist Report by Jennifer Tso, and replacement planting maps/plans; I was on-site on March 11, 2021, and summarized my observations. This letter is not an official risk assessment. My findings are limited to the City staff's information and my visual observations from ground level.

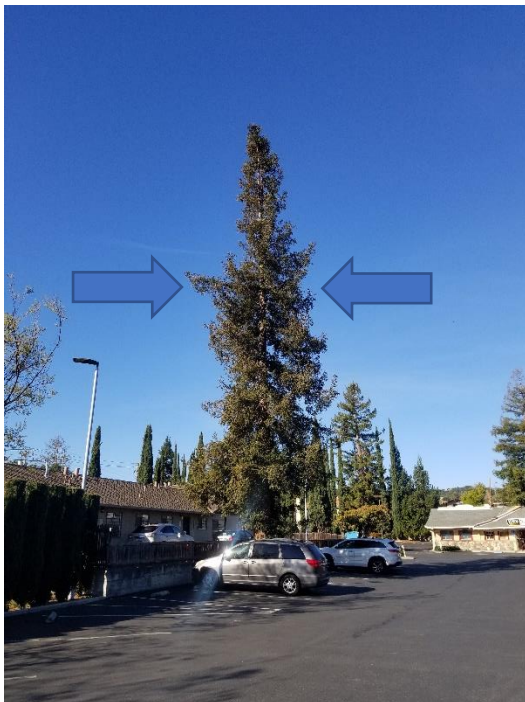
Satellite Image:



Observations:



The above image shows a neighboring Coast Live Oak (*Quercus agrifolia*) slated for removal. The tree exhibited fair health and structure. Additionally, it could likely recover from root pruning due to sufficient energy reserves.



The above photo shows a drought-stressed Coast Redwood (*Sequoia sempervirens*) slated for removal within property lines. The tree is likely suffering from overexposure to the sun and wind and a prolonged California drought.



The above image shows a line of healthy Hollywood Junipers slated for removal near the center of the property. A few had codominant branching, though the branching had U-shaped branch unions conducive to structural stability (codominant branching is relatively normal for the species).



The above image shows a stunted bronze loquat slated for removal near the edge of the property. The tree exhibited fair health and structure. Stunted growth was likely due to drought stress and overexposure to the wind and sun.



The above image shows rows of healthy Italian Cypress trees with good, upright structures along the two sides of the largest parking lot on the property. These are all large specimens that provide significant ecosystem services such as carbon storage and sequestration.



The above image shows two mature Coast Redwoods on the adjacent property that will have roots cut by construction (neither were in the original report). They both exhibited fair health and structure and have the potential to recover from root pruning due to sufficient energy reserves. They provide many benefits to the urban forest considering they are both mature, large specimens and California natives that other California organisms have coevolved with.



The above image shows another adjacent property, Oak; this Coast Live Oak is at the corner of the property, the farthest point from either nearby road. The tree exhibited fair health and structure and, like the other trees on adjacent properties, could likely recover from root pruning due to sufficient energy reserves.



The above image shows a Silver Dollar Gum on the adjacent property that exhibited fair health and structure; this tree also showed sufficient energy reserves to recover from root pruning. This tree was not in the original report.



The above image shows two London Plane trees on the adjacent property that will have roots cut by construction; neither were listed in the original report. The trees exhibited fair health and structure. However, these trees did not yet have leaves, flowers, or fruit, so my assessment of these trees' health was limited.



The image above shows three Chinese Hackberries in fair health and structure along the edge of the property; all three were recommended for removal and are directly in line with the proposed construction.

Discussion:

The trees on adjacent properties that I photographed can potentially survive construction with proper tree protection standards and root pruning that minimizes damage. An example of root pruning that minimizes damage is root shaving the top of roots to grade level rather than cutting off entire roots along a set line. Trees can still conduct water and nutrients through roots if only part of the original root remains, and the root is still living.

Root barriers (ideally foam, though plastic, is sufficient) can deter future infrastructure damage by inhibiting root growth towards the direction of the barrier. Additionally, end-weight reduction pruning can decrease the chance of tree or branch failure after root pruning negatively impacts structure. This decreased chance of tree or branch failure is due to the reduced forces on the lever arms of branches that occur after end-weight reduction pruning.

The trees will likely suffer structurally from construction, either directly by root pruning or indirectly by compacted soil with less pore space and oxygen from heavy equipment used around the trees. Dieback is expected in the canopy on the same side as root pruning; dieback after root pruning is standard and should not automatically condemn the tree.

Peer Review:

The report by ISA Certified Arborist Jennifer Tso proposed removing all 51 onsite trees. Unfortunately, this appears to be the only course of option given the proposed landscaping across the whole property. Landscaping will occur directly in line with the onsite trees. If the property owners are open to changing the proposed landscaping to create tree wells around existing trees, Trees #5, #6, and #16-21 have the potential for retention (they would suffer root damage, and property owners should anticipate dieback for the first two years). I agree with Ms. Tso's findings of the existing trees, though I believe there are additional efforts necessary to protect adjacent property trees.

The report lists four offsite Coast Live Oaks; I found an additional two Coast Redwoods, one Silver Dollar Gum, and two London Plane trees, all immediately bordering the property. Due to their location, these offsite trees will incur root damage from the proposed construction plans and should be in the Tree Protection Plan. I believe Ms. Tso's "Tree Protection Recommendations" (Tso, 11), including fencing off the areas as close to the dripline of the trees as possible, is a solid base to work off. I have added additional recommendations on Page 8.

I believe The Replacement Plan should be amended, particularly regarding ecosystem services and resiliency to pests and pathogens. The Replacement Plan recommends planting 36 Box trees (presumably Boxwood Trees, which are a hedge), 14 Arbutus 'Marina' trees, 2 Chinese Pistache trees, and 2 Gingko 'Fastigiata and 24 Magnolia' Little Gem' trees. None of these trees are native to California (Arbutus 'Marina' is an ornamental cultivar, although its origins are from a California nursery, it is not a California native tree by wildlife standards). Because they are not native, local fauna has not evolved to interact with them, and the proposed trees do not support local wildlife such as beneficial insects to that extent native trees would. Although the

proposed total of 78 plantings is greater than the current number of trees on site, their sizes (24" box) will not replace many of the current trees' ecosystem services, possibly for decades.

Recommendations:

I recommend attempting to retain all the trees immediately bordering the property, including two Coast Redwoods, one Silver Dollar Gum, and two London Plane Trees in addition to the four Coast Live Oaks referenced in Ms. Tso's January 18, 2022, arborist report. I also recommend exploring the possibility of changing the proposed sidewalk and planters to include tree wells to preserve Trees #5, #6, and #16-21, adding them to the Tree Protection Plan. Tree #6 is the only one of these trees not in good condition; however, with watering and potential wind protection by the proposed building, this tree's condition may improve. Additionally, Tree #6 is a Coast Redwood, a famously resilient species with the ability to resprout even after total defoliation.

To limit the extent of root damage, I recommend root shaving the top of the roots to grade level rather than cutting entire roots off. Next, foam root barriers above shaved roots can deter invasive root growth towards infrastructure. Additionally, property owners should discuss the possibility of end-weight reduction pruning the remaining trees with the adjacent property owners. This form of pruning can help reduce the chance of branch or trunk failure after root pruning, where the trees will have less structural integrity. Pruning should not remove more than 25% of the tree's canopy to allow the trees to photosynthesize adequately.

An ISA Tree Risk Assessment Qualified arborist (TRAQ) should perform a Level 1: Tree Risk Assessment of all the retained trees every six months for the first year and a half after root pruning. This form of risk assessment can help property owners know if tree risk is at a tolerable level and whether the trees' conditions have degraded more than anticipated.

I recommend planting at least two trees for each removal (102 trees total, given the current removal list) rather than the proposed 78 plantings. This planting strategy approaches carbon storage and sequestration, air and water filtration, and wildlife habitat benefits of the subject trees. Ideally, the property managers would plant between 5-10 trees for each removal to replace ecosystem services (replacement number would depend on the size and species of the replaced specimen). However, a replacement rate more significant than two plantings per tree is likely not feasible given the property size and proposed landscaping.

I believe property owners should plant more California native trees tolerant of inevitable droughts and water-use restrictions. Engelmann Oak (*Quercus engelmannii*) and Island Oak (*Quercus tomentalla*) are strong candidates for large-space plantings, and Desert Willow (*Chilopsis linearis*), Western Redbud (*Cercis occidentalis*), and Coffeeberry (*Frangula californica*) are ideal for smaller-spaced plantings. Western Redbud has attractive flowers that may fit with the aesthetic goals of the property owners.

West Coast Arborists Inc. – 390 Martin Avenue, Santa Clara, CA 95050 - (408) 855-8660 Wcainc.com

If possible, the property owners will increase the number of species they are planting significantly (adding at least five species to The Replacement Plan), making the urban forest more resilient. Otherwise, having only five species of trees leaves the urban forest highly vulnerable to pests, pathogens, and abiotic factors adversely affecting any one species.

Thank you for allowing me to assist you in your tree assessment needs-

Sincerely,

Peter Richards

Plant Health Care Arborist

ISA Certified Arborist- Credential ID: WE-13340

ISA Tree Risk Assessment Qualification- Credential ID: 31985411

Qualified Applicator License- Credential ID: 161737

Glossary:

Rating Category	Health	Structure	Form
Good	Vigor is normal for the species. No significant damage to diseases or pests. Any twig dieback, defoliation, or discoloration is minor.	Well-developed structure. Defects are minor and can be corrected.	Minor asymmetries/deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised.
Fair	Reduced vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may comprise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defects. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries/deviations from species norm and/or intended use. Function and/or aesthetics are compromised.
Poor	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect or multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric/abnormal. Detracts from intended use and/or aesthetics to a significant degree.

Bibliography:

Council of Tree & Landscape Appraisers. *Guide for Plant Appraisal, 10th Edition: Second Printing*. International Society of Arboriculture. June 2019. Print.

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, the Consultant can neither guarantee nor be responsible for the accuracy of information provided by others. Standard of Care has been met with regards to this project within reasonable and normal conditions.
2. The Consultant will not be required to give testimony or to attend court by reason of this report unless subsequent contractual agreements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
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 by any other than the person to whom it is addressed, without the prior written consent of the Consultant.
5. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a stipulated result, a specified value, the occurrence of a subsequent event, nor upon any finding to be reported.
6. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, or coring, unless otherwise stated. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree(s) or property in question may not arise in the future.
7. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. It is highly recommended that you follow the arborist recommendations; however, you may choose to accept or disregard the recommendations and/or seek additional advice.
8. Arborists cannot detect every condition that could possible lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specific period of time.
9. Any recommendation and/or performed treatments (including, but not limited to, pruning or removal) of trees may involve considerations beyond the scope of the arborist's services, such as property boundaries, property ownership, site lines, disputes between neighbors, and any other related issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist can then be expected to consider and reasonably rely on the completeness and accuracy of the information provided.
10. The author has no personal interest or bias with respect to the subject matter of this report or the parties involved. He/she has inspected the subject tree(s) and to the best of their knowledge and belief, all statements and information presented in the report are true and correct.



September 3, 2020

Ryan Lin
Ronsale Management, LLC
669.269.8515 | rlin@ronsdale.co

Re: Arborist Report for 1655 S De Anza Blvd, Cupertino

Dear Ryan,

This arborist report addresses the proposed mixed-use project at 1655 S De Anza Blvd. Per the City of Cupertino's Protected Trees Ordinance Chapter 14.18, the scope of work includes:

- Tag, identify and measure all protected trees on or overhanging the property. Trees that are considered protected per the city ordinance are defined as:
 - Mature specimen trees with a minimum single-trunk of 12" diameter (at 4.5' above grade, DBH) or multi-trunk DBH of 24" or greater, of the following species: Coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), black oak (*Q. kelloggii*), blue oak (*Q. douglasii*), interior live oak (*Q. wislizeni*), California buckeye (*Aesculus californica*), big leaf maple (*Acer macrophyllum*), Deodar cedar (*Cedrus deodara*), Blue Atlas cedar (*Cedrus atlantica* 'Glauca', California bay (*Umbellularia californica*), Western sycamore (*Platanus racemosa*)
 - Heritage trees designed by Planning Commission.
 - Approved development tree(s).
- Assess individual tree health and structural condition.
- Assess proposed improvements for potential encroachment.
- Based on proposed encroachment, tree health, structure, and species susceptibility, make recommendations for preservation.
- Provide above information on a Tree Protection Plan, to include: tag #s, approximate dripline, whether a tree is removed or preserved, tree protection fencing locations, and tree protection recommendations.

Project Summary

The property is located northwest of the S De Anza Blvd & Prospect Road intersection. It is an L-shaped site, wrapping around a medical office & gas station. The "longer" side of the property has a commercial building surrounded by parking, while the shorter end (by Prospect Road) consists entirely of parking lot. There is a moderate number of existing trees, mainly along the property lines, consisting of Italian cypresses, Hollywood junipers, loquat, redwood, and London planetree. These are all restricted to small landscape areas or parking lot cut outs, and some have grown surprisingly large with their limited space. Additionally, off-site hackberries, redwoods, oaks, and eucalyptuses overhang the property line (Figure 1).

The proposed project will demolish all existing structures and hardscape to construct residential townhomes along the west property line and mixed use buildings along the north property line. The mixed use buildings include commercial and parking space on the lowest level with residences on the upper levels. The structures max out at three levels, though the building height varies across the footprint.

Only four trees are considered protected per the city ordinance, and all of them are coast live oaks (*Quercus agrifolia*) located on the property to the north. The trunks of the three largest oaks are right next to the shared fence, so their root systems have likely proliferated beneath the parking lot.

It is my opinion that one of the oaks will be subjected to excessive pruning as well as potentially significant root encroachment. This tree is a likely candidate for removal.

Two additional large oaks may also be subjected to high root encroachment. Since pre-construction root assessment is not possible, the fate of these three trees will be determined during construction. The fourth oak is the smallest and can be saved with low encroachment.



Figure 1.. The proposed mixed-use building will be approximately 10' from the property line. Trees #3 & 4 (above) may be subjected to significant root & canopy pruning.

Assumptions & Limitations

This report is based on my site visit on 8/27/20, and the following plans:

- Topographic map by Alpha Land Surveys, Inc. dated 4/20/19
- Site plan by Dahlin, dated 6/10/20
- Grading, drainage and utility plans by Sandis, dated 3/6/20 (Sheets C6.0-8.0)

It was assumed the proposed improvements were accurately surveyed. Only one protected oak was located on the survey, along with a few non-protected trees. I approximately located the three other protected trees on my tree protection plan.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.

Tree Inventory & Assessment Table

#s: Each tree was assigned a number between #1-4, corresponding to their locations in the tree protection plan. They were not physically tagged as they were located off-site.

DBH (Diameter at Breast Height): Trunk diameters in inches were measured at 4.5’ above average grade with a diameter tape. Height of measurement may deviate from the standard on atypical trunks; deviations are noted under the “Comments” section.

Health & Structural Condition Rating

Dead: Dead or declining past chance of recovery.

Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.

Fair (F): Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.

Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.

Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Dripline: Canopy radius was visually estimated in each cardinal direction.

Age

Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.

Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.

Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

DE: Dripline Encroachment (X indicates encroachment)

CI: Anticipated Construction Impact (L = Low, M = Moderate, H = High)

#	Species	DBH	Health	Structure	Dripline				Age	DE	CI	Comments	Action
					N	E	S	W					
1	Coast live oak (<i>Quercus agrifolia</i>)	14.5	G-F	F	0	0	20	20	Y	X	M	Off-site tree, not surveyed. Canopy growing towards power lines. 30deg phototropic lean to SW. Co-dominant stems at 8’ above grade; stems twist & contact at 2 areas (will eventually graft). Slightly sparse canopy, partially understory tree. 15’ from proposed townhome (2-3 stories by tree), 6’ from proposed P/L fence.	Arborist on site during demo and grading within dripline. Pruning to be done by ISA certified personnel.

#	Species	DBH	Health	Structure	Dripline				Age	DE	CI	Comments	Action
					N	E	S	W					
2	Coast live oak	32	G	G-F	25	30	30	35	M	X	H	Off-site tree. Diameter estimated due to fence. Trunk flush to and deforming wire fence. Hardscape lifted by trunk. Ivy climbing into canopy. Branches stripped of interior foliage for clearance over parking. Several large scaffolds from short height on trunk (but not co-dominant). Low-growing scaffold branch 40' to SW. Proposed walkway within 1' of trunk, 11' from proposed townhome. Will require major clearance pruning.	Recommend moving proposed walkway further from tree, i.e. switch with landscape strip, to reduce impact on trunk flare. Pruning shall be minimized (work scaffolding around limbs) but may still cause decline. Project arborist on site during demo, grading; if root loss is excessive, tree may need to be removed.
3	Coast live oak	20.5, 23.5	G	P	30	20	12	20	M	X	M-H	Off-site tree, not surveyed. Co-dominant stems; topped at 15' for power line clearance. Noticeable leaf damage by gall wasps. Dense canopy. 10' from proposed townhome; proposed walkway next to fence; proposed storm drain 8' to S. Will require significant clearance pruning.	Recommend moving proposed walkway further from tree, i.e. switch with landscape strip. Pruning shall be done by certified personnel. Project arborist on site during demo, grading; if root loss is excessive, tree may need to be removed.
4	Coast live oak	19.5	G	P	15	12	18	20	M	X	M-H	Off-site tree, not surveyed. Topped. 10' from proposed townhome; proposed walkway next to fence; proposed storm drain 8' to S. Will require significant clearance pruning.	

Discussion

The only protected trees that will be affected by the project are located on the property to the north, right next to the property line. The oaks to the west (trees #1 & 2) are growing in a larger landscape area, while the oaks to the east (#3 & 4) are in a narrow parking lot landscape strip. The canopies of trees #3 & 4 have also been topped for power line clearance. Once the proposed project is completed, their canopies will be further limited by clearance pruning from the new buildings.

The proposed structures are 10' from the north property line, with new sidewalks and landscaping proposed for the setback. The trunk flare of oak #2 has pushed out the existing fence and lifted the existing asphalt – large roots are thus likely to be close to the surface where they can be damaged by excavation & grading. Even when fill is proposed, as in this case, the sub-grade is usually re-graded to minimum specifications. If feasible, I recommend switching the proposed sidewalk and landscape area to minimize grading next to the property line.



Figure 2. Significant canopy reduction will be needed for oak #2 – some large limbs will need to be completely removed back to the trunk. The pruning shall be done in stages, as needed, to the minimum amount needed for each phase of construction.

Construction of landscaping areas may be more flexible around tree roots, since landscaping does not need to be compacted to a high degree to support hardscape. Additionally, a lack of visible hardscape damage (e.g. by trees #3 & 4) does not infer that roots will not be affected. Roots frequently grow beneath pavement and may be damaged during grading & excavation. Due to existing hardscape along the fence line, it is not possible to assess potential root damage until construction is under way. I recommend having an arborist on-site during demolition and grading by trees #2-4 to ensure that they are not carelessly damaged and to assess root loss.

Oak #2 will also be subjected to over-pruning, which may affect its health more than the grading (Figure 2). The current structure of the tree requires more aggressive pruning, with larger pruning cuts. For instance, two of its lower large-diameter scaffold branches are up to 30'-35' long, with their interior branches removed for clearance over the parking lot. Now, it is not possible to shorten the branches back to smaller secondary branches without leaving unattractive stubs. They will likely have to be removed back at their attachment, which results in a large wound next to the trunk. I recommend doing the minimum amount of pruning needed at each stage of construction, rather than completing the clearance pruning all at once. The pruning contractor shall be certified by the International Society of Arboriculture (ISA), and shall work with the relevant sub-contractor(s) to determine the minimum amount of clearance pruning. Regardless, this oak may still need to be removed if the combined root loss and clearance pruning is excessive.

Tree Protection Recommendations (to be printed on site plans)

Design Phase

- If feasible, switch the locations of the proposed sidewalk and landscape area along the north property line by trees #2-4 to reduce root encroachment from grading. This is especially important for tree #2, whose trunk and roots are clearly causing damage.
- The project arborist shall review all plan changes that may affect the off-site trees.

Pre-Construction Phase

- A pre-construction meeting shall be conducted between the project arborist, general contractor, and relevant subcontractors to discuss tree protection during each phase of construction.

Demolition Phase

- The project arborist shall be on-site during parking lot demolition within the dripline of tree #2. The asphalt next to the trunk shall be carefully demolished by hand to avoid damaging the trunk flare.
- Once the parking lot demolition is completed, but prior to the start of grading or other construction activities, the contractor shall install 6' chain-link fencing to construct a temporary Tree Protection Zone (TPZ) around each tree or grove of trees as indicated on the tree protection plan.
- TPZ fencing shall remain in an upright sturdy manner from the start of grading until the completion of construction. Fencing shall not be adjusted or removed without consulting the project arborist.

Foundation, Grading, and Construction Phase

- The project arborist shall be on-site during excavation/grading within the driplines of trees #2-4. Roots ≥ 2 " shall be cleanly pruned with a handsaw or sawzall, immediately covered, and kept moist till backfilled. If root loss is significant, the trees may need to be removed.
- Pruning of tree #2 shall be kept to a minimum at each stage of construction; temporary scaffolding shall be worked around large branches wherever possible. All pruning shall be performed by personnel certified by the International Society of Arboriculture (ISA; "Certified Tree Worker" or "Certified Arborist"). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices.
- Should Tree Protection Zone (TPZ) encroachment be necessary, the contractor shall contact the project arborist for consultation and recommendations.
- Contractor shall keep TPZs free of all construction-related materials, debris, fill soil, equipment, etc. The only acceptable material is mulch spread out beneath the trees.
- Should any damage to the trees occur, the contractor shall promptly notify the project arborist to appropriately mitigate the damage.

Landscaping Phase

- The Tree Protection Zone (TPZ) fencing shall remain in place with the same restrictions until landscape contractor notifies and meets with the project arborist.
- Avoid all fill work, grade changes, and trenching within driplines unless it is performed by hand.
- Pipes shall be threaded under or through large roots without damaging them.
- All planting within oak driplines shall be compatible with oaks, consisting of plant material that requires little to no water after two years' establishment. A list of oak-compatible plants can be found in a publication from the California Oak Foundation, available at: <http://californiaoaks.org/wp-content/uploads/2016/04/CompatiblePlantsUnderAroundOaks.pdf>

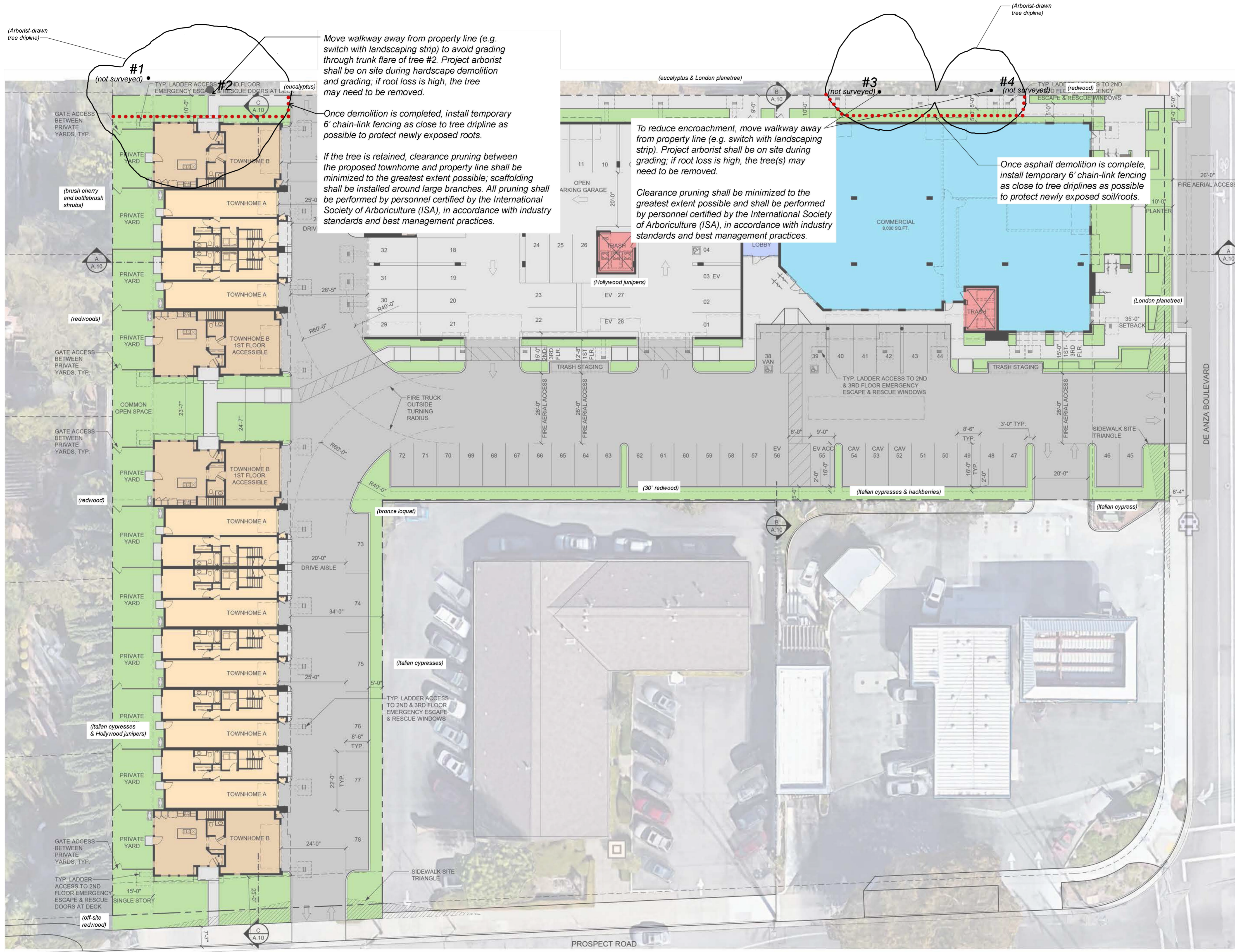
Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

Please see attached tree protection plan.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jennifer Tso', with a stylized, cursive script.

Jennifer Tso
Certified Arborist #WE-10270A
Tree Risk Assessor Qualified



- TREE PROTECTION RECOMMENDATIONS**
- DESIGN PHASE**
- IF FEASIBLE, SWITCH THE LOCATIONS OF THE PROPOSED SIDEWALK AND LANDSCAPE AREA ALONG THE NORTH PROPERTY LINE BY TREES #2-4 TO REDUCE ROOT ENCROACHMENT FROM GRADING. THIS IS ESPECIALLY IMPORTANT FOR TREE #2, WHOSE TRUNK AND ROOTS ARE CLEARLY CAUSING DAMAGE.
 - THE PROJECT ARBORIST SHALL REVIEW ALL PLAN CHANGES THAT MAY AFFECT THE OFF-SITE TREES.
- PRE-CONSTRUCTION PHASE**
- A PRE-CONSTRUCTION MEETING SHALL BE CONDUCTED BETWEEN THE PROJECT ARBORIST, GENERAL CONTRACTOR, AND RELEVANT SUBCONTRACTORS TO DISCUSS TREE PROTECTION DURING EACH PHASE OF CONSTRUCTION.
- DEMOLITION PHASE**
- THE PROJECT ARBORIST SHALL BE ON-SITE DURING PARKING LOT DEMOLITION WITHIN THE DRIPLINE OF TREE #2. THE ASPHALT NEXT TO THE TRUNK SHALL BE CAREFULLY DEMOLISHED BY HAND TO AVOID DAMAGING THE TRUNK FLARE.
 - ONCE THE PARKING LOT DEMOLITION IS COMPLETED, BUT PRIOR TO THE START OF GRADING OR OTHER CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL 6' CHAIN-LINK FENCING TO CONSTRUCT A TEMPORARY TREE PROTECTION ZONE (TPZ) AROUND EACH TREE OR GROVE OF TREES AS INDICATED ON THE TREE PROTECTION PLAN.
 - TPZ FENCING SHALL REMAIN IN AN UPRIGHT STURDY MANNER FROM THE START OF GRADING UNTIL THE COMPLETION OF CONSTRUCTION. FENCING SHALL NOT BE ADJUSTED OR REMOVED WITHOUT CONSULTING THE PROJECT ARBORIST.
- FOUNDATION, GRADING, AND CONSTRUCTION PHASE**
- THE PROJECT ARBORIST SHALL BE ON-SITE DURING EXCAVATION/GRADING WITHIN THE DRIPLINES OF TREES #2-4. ROOTS $\geq 2'$ SHALL BE CLEANLY PRUNED WITH A HANDSAW OR SAWZALL, IMMEDIATELY COVERED, AND KEPT MOIST TILL BACKFILLED. IF ROOT LOSS IS SIGNIFICANT, THE TREES MAY NEED TO BE REMOVED.
 - PRUNING OF TREE #2 SHALL BE KEPT TO A MINIMUM AT EACH STAGE OF CONSTRUCTION; TEMPORARY SCAFFOLDING SHALL BE WORKED AROUND LARGE BRANCHES WHEREVER POSSIBLE. ALL PRUNING SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA; "CERTIFIED TREE WORKER" OR "CERTIFIED ARBORIST"). ALL PRUNING SHALL ADHERE TO ISA AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARDS AND BEST MANAGEMENT PRACTICES.
 - SHOULD TREE PROTECTION ZONE (TPZ) ENCROACHMENT BE NECESSARY, THE CONTRACTOR SHALL CONTACT THE PROJECT ARBORIST FOR CONSULTATION AND RECOMMENDATIONS.
 - CONTRACTOR SHALL KEEP TPZS FREE OF ALL CONSTRUCTION-RELATED MATERIALS, DEBRIS, FILL SOIL, EQUIPMENT, ETC. THE ONLY ACCEPTABLE MATERIAL IS MULCH SPREAD OUT BENEATH THE TREES.
 - SHOULD ANY DAMAGE TO THE TREES OCCUR, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE PROJECT ARBORIST TO APPROPRIATELY MITIGATE THE DAMAGE.
- LANDSCAPING PHASE**
- THE TREE PROTECTION ZONE (TPZ) FENCING SHALL REMAIN IN PLACE WITH THE SAME RESTRICTIONS UNTIL LANDSCAPE CONTRACTOR NOTIFIES AND MEETS WITH THE PROJECT ARBORIST.
 - AVOID ALL FILL WORK, GRADE CHANGES, AND TRENCHING WITHIN DRIPLINES UNLESS IT IS PERFORMED BY HAND.
 - PIPES SHALL BE THREADED UNDER OR THROUGH LARGE ROOTS WITHOUT DAMAGING THEM.

TREE PROTECTION PLAN
 By: Jennifer Tso
 Certified Arborist #WE-10270A
 Traverso Tree Service, Inc.
 September 3 2020
 (drawn on proposed site plan)



