Walter Levison
CONSULTING ARBORIST
ASCA Registered Consulting Arborist #401 / ISA Tree Risk Assessment Qualified / ISA Certified Arborist #WE-3172A
Cell: (415) 203-0990 / Email: walterslevisonjr@yahoo.com

# Assessment of Sixteen (16) Protected-Size Trees at and adjacent to 62 Ellenwood Avenue Los Gatos, California

Prepared for:
Sean Mullin, Associate Planner
Town of Los Gatos Community Development Department
110 E. Main Street
Los Gatos, CA 95030

Field Visit:
Walter Levison, Contract Town Arborist (CTA)
5/27/2020

Report by CTA
6/3/2020

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# 1.0 Summary

a. Below is a matrix style overview of protected-size trees (non-exempt species, 4-inches diameter at 4.5 feet above grade). In the table, the CTA (Contract Town Arborist) has outlined expected impacts to each tree, along with suggestions for adjustments to the plan set (if applicable) that will optimize tree survival over the long term.

The CTA calculated the appraised value of each tree, which can be used as a tool for determining the proper security bond amount to have the applicant post with the Town as a hedge against site plan-related tree damages (if applicable). Appraised values can also be used to determine damage fees if trees are determined during or after construction to have been damaged such that mitigation is required.

Mitigation replacement rate and size is noted for each tree in the case that removal or damage to trees occurs.

Note: Only trees within relatively close proximity of proposed work are included in this tree study (e.g. tree trunks located between approximately zero and 30 linear feet of current proposed new grading, utility trenching, excavation, haul routes, landscaping, etc. as shown on proposed plans, and trees with canopy driplines that encroach onto the subject property.

Table 1.0(a) (REFER TO THE CTA'S TREE MAP MARKUP WHEN REVIEWING THIS MATRIX)

| Line Number | Tree Tag Number / Common Name | Expected Tree Disposition | Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability | Large Protected Tree (LPT)?<br><br>Tree Conservation Suitability Rating (TCS)? | Appraised Value | Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good" | Replacement Rate Per Canopy Lost | Replacement Size Tree |
|---|---|---|---|---|---|---|---|---|
| 1 | 901<br>valley oak | Retain | 12 feet | YES<br><br>Moderate | $20,500. | **Eliminate all proposed subbase prep and base section prep for the new driveway, such that there will be no excavation below the elevation of the existing asphalt**.<br><br>Note current distance from trunk edge to asphalt is 9 feet. Proposed edge will be approximately 7 feet. | 6 X $250 = $1,500. | 24" box |

| Line Number | Tree Tag Number / Common Name | Expected Tree Disposition | Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability | Large Protected Tree (LPT)?<br><br>Tree Conservation Suitability Rating (TCS)? | Appraised Value | Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good" | Replacement Rate Per Canopy Lost | Replacement Size Tree |
|---|---|---|---|---|---|---|---|---|
| 2 | 902<br>valley oak | Retain | 12 feet | YES<br><br>Moderate | $21,400. | **Eliminate all proposed subbase prep and base section prep for the new driveway, such that there will be no excavation below the elevation of the existing asphalt.**<br><br>Note current asphalt distance to trunk edge is 1.5 feet. Proposed new asphalt will be approximately 5.5 feet offset from trunk edge. | 6 X $250 = $1,500. | 24" Box |
| 3 | 905<br>deodar cedar | Retain | Est. 13 feet | YES<br><br>Poor | $13,400. | Note existing distance from trunk edge to asphalt driveway edge is 3 feet, with root system assumed to extend at least 20 feet radius beneath asphalt to the residence footprint.<br><br>Proposed new offset distance is zero feet from trunk edge to new dog run shown on sheet L0.0 as artificial turf. Typical artificial turf installs involve excavation for base section below grade, which could destroy the entire root zone of tree #905.<br><br>**The CTA suggests maintaining all proposed new dog run artificial turf work above-grade such that there will be essentially zero impact to tree roots extending from this tree.** | 6 X $250 = $1,500. | 24" Box |

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|---|---|---|---|---|---|---|---|---|
| 4 | 906<br>Deodar cedar | Retain | 9 feet | Poor | $4,690. | Current asphalt is roughly 3 feet from trunk edge. Roots assumed to extend at least 20 feet radius to existing residence.<br><br>**The CTA suggests maintaining all proposed new dog run artificial turf work above-grade such that there will be essentially zero impact to tree roots extending from this tree.** | 3 X $250 = $750. | 24" Box |
| 5 | 907<br>Deodar cedar | Retain | 9 feet | Poor | $3,690. | Current asphalt is roughly 3 feet from trunk edge. Roots assumed to extend at least 20 feet radius to existing residence.<br><br>**The CTA suggests maintaining all proposed new dog run artificial turf work above-grade such that there will be essentially zero impact to tree roots extending from this tree.** | 3 X $250 = $750. | 24" Box |

| Line Number | Tree Tag Number / Common Name | Expected Tree Disposition | Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability | Large Protected Tree (LPT)?<br><br>Tree Conservation Suitability Rating (TCS)? | Appraised Value | Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good" | Replacement Rate Per Canopy Lost | Replacement Size Tree |
|---|---|---|---|---|---|---|---|---|
| 6 | 908<br>Deodar cedar | Retain | Est. 9 feet | Mod | $3,290. | Current asphalt roughly 3 feet from trunk edge, assumably with poorly compacted base section.<br><br>Proposed walkway will encroach to approx. the same distance from trunk edge (3 feet offset) with possible severe root loss.<br><br>Proposed SD storm drain pipe trench shown on sheet C3.1 will encroach to roughly 8 feet offset from trunk edge.<br><br>**Suggest push storm drain SD pipe trench to 10 feet offset from trunk edge.**<br><br>**Suggest use over-grade system consisting of TriAx geogrid over grade, and built up the walkway baserock base section on top.** | 3 X $250 = $750. | 24" Box |

| Line Number | Tree Tag Number / Common Name | Expected Tree Disposition | Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability | Large Protected Tree (LPT)?<br><br>Tree Conservation Suitability Rating (TCS)? | Appraised Value | Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good" | Replacement Rate Per Canopy Lost | Replacement Size Tree |
|---|---|---|---|---|---|---|---|---|
| 7 | 909<br>Coast live oak | Retain | 12 feet | YES<br><br>Poor | $11,300. | Distance from existing residence: 19 feet.<br><br>Distance from proposed narrow walkway: 3.5 feet.<br><br>Distance from proposed spa and wide walkway: 8 feet.<br><br>Proposed SD storm drain pipe trench per sheet C3.1 is 8 to 9 feet from trunk edge.<br><br>**Suggest push SD storm drain pipe trench to 12 feet offset to avoid Critical Root Zone edge.**<br><br>**Suggest pull out proposed spa to 12 feet offset, and proposed wide walkway to 12 feet, to avoid Critical Root Zone.**<br><br>**Suggest build narrow walkway over-grade as a no-dig system using TriAx geogrid to avoid Critical Root Zone.** | 4 X $250 = $1,000 | 24" Box |

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|---|---|---|---|---|---|---|---|---|
| 8 | 910 | Retain | 16 feet | YES<br><br>Poor | $19,000. | Pool patio will encroach to within 12 feet southwest of trunk edge, and finish elevation indicates the patio surface will be approximately at existing soil grade, which means that the proposed new patio base section would be excavated down approximately 18 to 24 inches below existing grade.<br><br>**The CTA suggests redesigning the proposed patio and all new concrete landing elements adjoining the proposed walkways, such that we can maintain an offset of 15 to 20 feet from the trunk edge of oak #910 for ALL PROPOSED NEW WORK to preserve the tree's root system**. | 6 X $250 = $1,500. | n/a |
| 9 | 915 | Retain | 5 feet | Good | $1,750. | Proposed storm drain pipe trench shown on sheet C3.1 is 6 to 7 feet offset from trunk edge.<br><br>**Suggest push storm drain pipe trench to 12 feet offset from trunk edge.** | 3 X $250 = $750. | 24" Box |

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|---|---|---|---|---|---|---|---|---|
| 10 | 916 | Retain | 5 feet | Good | $3,140. | Note tree is lopsided eastward, in close proximity to the proposed solar cell array area. But given that the tree is slightly north of the array, there may not be any solar access issues affecting the panels, since the typical sun track arc throughout the year will either be canted southward (winter/spring) or directly overhead (summer).<br><br>Proposed storm drain pipe trench shown on sheet C3.1 is 6 to 7 feet offset from trunk edge.<br><br>**Suggest push storm drain pipe trench to 12 feet offset from trunk edge.** | 3 X $250 = $750. | 24" Box |

| Line Number | Tree Tag Number / Common Name | Expected Tree Disposition | Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability | Large Protected Tree (LPT)?<br><br>Tree Conservation Suitability Rating (TCS)? | Appraised Value | Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good" | Replacement Rate Per Canopy Lost | Replacement Size Tree |
|---|---|---|---|---|---|---|---|---|
| 11 | 921 | Retain | 20.5 feet | YES<br><br>Poor | $21,100. | Existing deep excavation is 16 feet offset from trunk. Existing putting green has damaged the root system of this tree most likely, and the tree has been limbed up (pruned) to remove all lower elevation limbs. **The tree may not actually be worth retaining, given its current impacted state.**<br><br>Sheet C2.1 shows new retaining wall at 8 feet from trunk edge, which would be a severe violation of the Critical Root Zone.<br><br>**Suggest consider removing this tree, unless retaining wall can be pushed significantly farther offset distance from trunk (although the tree is not actually worth the cost of major redesign).**<br><br>Sheet C3.1 shows new storm drainage systems (daigramatic representation) with excavation at 4 or 5 feet offset from trunk. Again, **this will not be possible to install due to violating the Critical Root Zone, unless excavated by hydrovac and the pipe slipped in between the roots.** | 4 X $250 = $1,000 | 24" Box |

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|---|---|---|---|---|---|---|---|---|
| 12 | 923 | Retain | Est. 18 | YES<br><br>Poor to Mod | $37,000. | Existing distance from trunk edge to deep excavation cuts ranges from 17 to 30 feet +/-. Existing putting green extent of damage to lateral woody roots is unknown. Proposed new storm drain SD deep trench to be rough 10 or 11 feet offset from trunk edge per sheet C3.1. Proposed new outdoor restroom facility shown between 12 and 19 feet offset from trunk on sheet C2.1. Proposed new putting area (turf) base section excavation depth unknown (see landscape sheet L0.0). **Suggest eliminate the proposed golf turf area currently shown on grading plan between 2 feet and 20 feet offset from trunk. Suggest eliminate the proposed separate bathroom building facility shown on C2.1 Suggest eliminate the proposed storm drain pipe trench shown on sheet C3.1.**<br><br>**If all three (3) of these items were to be eliminated, a TPZ root protection zone can be established at roughly 15 to 17 feet offset from trunk edge.** | 10 X $250 = $2,500. | 24" Box |

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|---|---|---|---|---|---|---|---|---|
| 13 | 924 | Removal | N/A | YES | $29,400. | N/A | 6 X $250 = $1,500. | 24" Box |
| 14 | 925 | Retain | 12.5 feet | YES | $7,900. | The existing residence foundation is 7 feet south, 5 feet west, and 11 feet east of trunk edge. The existing concrete patio is assumed to have a deep baserock base foundation that likely required excavation and recompaction during installation, resulting in severe root loss to the tree. It is not clear as to how tree #925 has survived through severe root loss on four sides of the root zone, at distances all less than the Critical Root Zone structural stability minimum offsets.<br><br>Proposed new work will encroach to distances approximately at (or farther than) existing 100 year old residence foundation footing conditions.<br><br>Given that this tree is already in "poor" overall condition per the CTA's tree data table, it may prematurely die within 10 to 15 years, regardless of proposed new construction buildout. | 6 X $250 = $1,500. | 24" Box |

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|---|---|---|---|---|---|---|---|---|
| 15 | 950 (No Tag) | Retain | Est. 14 feet | YES<br><br>Good | $7,800. | Existing root zone intact. Neighbor-owned tree (not surveyed by project team) appears to be located near to where the proposed wooden steps will encroach in closest proximity to the north property line fence.<br><br>Proposed wooden steps will be approximately 5 to 6 feet offset from the trunk edge of this tree. The impacts of the steps in terms of root loss to redwood #950 will depend on whether the stairs are simply supported by standard 4X4 wooden posts in dug pier holes in the ground, or whether the stair system will involve more substantial engineered landings and foundation footings in addition to small-diameter piers/posts. **Note that significant damage to this tree's root system is not an option**, given that the tree is relatively very valuable, and owned by the neighbor to the north. **Applicant shall verify proposed wood step footing types and layout.**<br><br>**Use only small diameter individual pier holes and post supports for stairway.** | 3 X $250 = $750. | 24" Box |

| Line Number | Tree Tag Number / Common Name | Expected Tree Disposition | Critical Root Zone (CRZ) Radius Suggested for Optimal Structural Stability | Large Protected Tree (LPT)?<br><br>Tree Conservation Suitability Rating (TCS)? | Appraised Value | Suggested Changes to Applicant's Proposed Plans to Boost Tree Conservation Suitability Rating (TCS) to "Moderate" or "Good" | Replacement Rate Per Canopy Lost | Replacement Size Tree |
|---|---|---|---|---|---|---|---|---|
| 16 | 951 (No Tag) | Retain | Est. 13 feet | YES<br><br>Mod | $18,800. | Neighbor-owned valley oak specimen was not plotted by applicant's project team. Trunk location appears to be 6 feet to 8 feet southwest of the property line wall. **Applicant shall plot accurate trunk location of this neighbor tree on sheets for review by Town planning division.**<br><br>The canopy extends some 25 to 30 feet over the property line into the 62 Ellenwood lot.<br><br>Sheet C3.1 shows a stormwater detention system that will cut to within 6 feet of property line. **Suggest push stormwater detention system excavation to 9 or 10 feet offset from property line to increase root zone retention.**<br><br>Sheet C2.1 shows new retaining wall construction to within 10 or 11 feet of property line. This location is OK as proposed. | 10 X $250 = $2,500. | 24" Box |

**2019-20 Town of Los Gatos In-lieu fee equivalent = $250 per each required 24" box mitigation tree planting not installed on the site.**

TREE REMOVALS / FEES OR IN-LIEU PLANTINGS COVERED 100% BY PROPOSED NEW LANDSCAPE TREE INSTALLATIONS:

The proposed landscape plan shows installation of trees in quantities and sizes that far exceed the canopy replacement fee of $1,500 required for one (1) oak #924 proposed for removal.

However, the construction-related impacts to oaks being retained on site are quite severe, if the project were to be built as currently proposed per the applicant's plan set. See summary table 1.0(a) items in **bold black** above in this report for the CTA's suggested changes to the proposed plans to optimize tree survival.

## 2.0 Assignment & Background

Walter Levison, Contract Town Arborist (CTA) was directed to tag and assess all Protected-Size (4-inch diameter and greater) trees in relatively close proximity to the proposed site plan project area, including off-site trees on neighboring properties which were expected to be negatively impacted by the applicant's planned work.

The CTA assessed the entire set of plans dated 4/23/20 (by Arcanum Architecture, BKF Civil, and Studio Green).

Tree data were collected and assembled by the CTA in section 11.0 of this report.

The CTA's recommendations in section 4.0 of this report are based on published information in various standard arboriculture texts, such as the series of *Best Management Practices* (BMP) companion publication (booklets) published by International Society of Arboriculture that are periodically updated over time. The series of BMP booklets accompany the ANSI-A300 USA standards for tree care used by U.S.-based tree care companies.

Additional supporting information includes digital images archived by the CTA and included in section 10.0, and a tree map markup attached as section 12.0.

The CTA utilized a forester's D-tape to determine tree mainstem (trunk) diameters at 4.5 feet above grade. The D-tape is a circumferential tape that converts actual trunk circumference to an averaged diameter in inches and tenths of inches.

Tree heights were determined using a digital Nikon Forestry Pro 550 hypsometer.

Tree canopy spread diameters were estimated visually or paced off. The tree canopy driplines shown as black clouding on the tree map markup are approximate only.

The tree trunk plot dot locations shown on the CTA's tree map markup for trees #950 and #951 on neighboring properties are considered rough approximate only, as they were not plotted by the applicant's project team.

# 3.0 Town of Los Gatos – What Trees are Protected?

Per the most recent (2015) iteration of the Town of Los Gatos tree ordinance (Town Code Chapter 29 – Zoning Regulations, Article 1), the following regulations apply to all trees within the Town's jurisdiction (wordage adjusted):

1. All trees with at least a single mainstem measuring four (4) inches diameter or greater at 4.5 feet above grade are considered "**Protected Trees**" when removal relates to any development review.

2. 12 inch diameter (18 inch multistem total) trees on developed residential property not currently subject to development review.

3. 8 inch diameter (8 inch multistem total) blue oak (*Quercus douglasii*), black oak (*Quercus kellogii*), California buckeye (*Aesculus californica*), and Pacific madrone (*Arbutus menziesii*) on developed residential lots not currently subject to development review.

4. 8 inch diameter (8 inch multistem total) trees on developed residential property not currently subject to development review, on lots in the designated **Hillside Area** per the official Town map.

5. All trees with a single mainstem or sum of multiple mainstems totaling 48 inches diameter or greater at 4.5 feet above grade are considered "**Large Protected Trees" (LPT).**

6. All oak species (*Quercus spp*.), California buckeye (*Aesculus californica*), and Pacific madrone (*Arbutus menziesii*) with one or more mainstems totaling 24 inches diameter or more at 4.5 feet above grade are considered **"Large Protected Trees" (LPT).**

7. Section 29.10.0965. Prohibitions: A **permit** is required to prune, trim, cut off, or perform any work, on a single occasion or cumulatively, over a three-year period, affecting 25% or more of any **Protected Tree** (including below ground root system).

8. Section 29.10.0965. Prohibitions: A **permit** is required to prune, trim, or cut any branch or root greater than four (4) inches in diameter of a **Large Protected Tree**.

9. Section 29.10.0965. Prohibitions: A permit is required to conduct severe pruning on any protected tree. Severe pruning is defined in section 29.10.0955 as "topping or removal of foliage or significant scaffold limbs or large diameter branches so as to cause permanent damage and/or disfigurement of a tree, and/or which does not meet specific pruning goals and objectives as set forth in the current version of the International Society of Arboriculture Best Management Practices-Tree Pruning and ANSI A300-Part 1 Tree, Shrub, and Other Woody Plant Management-Standard Practices, (Pruning)."

10. Exceptions:

    Severe Pruning Exception in Town Code section 29.10.1010(3) "…..except for pollarding of fruitless mulberry (*Morus alba*) or other species approved by the Town Arborist….".

    Protected Tree Exceptions:

a. Edible fruit or nut bearing trees less than 18 inches diameter (multistem total or single stem), including fruiting olive trees.
b. *Acacia melanoxylon* (blackwood acacia) less than 24 inches (multistem total or single stem)
c. *Liriodendron tulipifera* (tulip tree) less than 24 inches (multistem total or single stem)
d. *Ailanthus altissima* (tree of heaven) less than 24 inches (multistem total or single stem)
e. *Eucalyptus globulus* (Tasmanian blue gum) less than 24 inches (multistem total or single stem)
f. *Eucalyptus camaldulensis* (River red gum) less than 24 inches (multistem total or single stem)
g. *Other eucalyptus species* (E. spp.) not noted above, less than 24 inches (multistem total or single stem) **(REMOVAL O.K. ONLY AT HILLSIDE AREA LOCATIONS PER OFFICIAL TOWN MAP):** www.losgatosca.gov/documentcenter/view/176
h. All palm species *(*except *Phoenix canariensis)* less than 24 inches (multistem total or single stem)
i. *Ligustrum lucidum* (glossy privet) less than 24 inches (multistem total or single stem)

**Note that per the exception in part 'a' above, fruiting olive trees with stems totaling less than 18 inches are considered non-protected.**

# 4.0 Recommendations

1. Project Arborist ("PA"):

Initial Signoff

It is recommended that a third party ASCA registered consulting arborist or ISA Certified Arborist with good experience with tree protection during construction be retained by the applicant, to provide pre-project verification that tree protection and maintenance measures outlined in this section of the arborist report are adhered to. Periodic (e.g. monthly) inspections and summary reporting, if required as a project condition of approval, are suggested in order to verify contractor compliance with tree protection throughout the site plan project. This person will be referred to as the project arborist ("PA"). The PA should monitor soil moisture within the root protection zones of trees being retained, using a Lincoln soil moisture probe/meter or equivalent. If required, inspection reports shall be sent to Mr. Sean Mullin, Associate Planner (smullin@losgatosca.gov). Sample wordage for a condition of approval regarding monitoring of tree protection and tree condition:

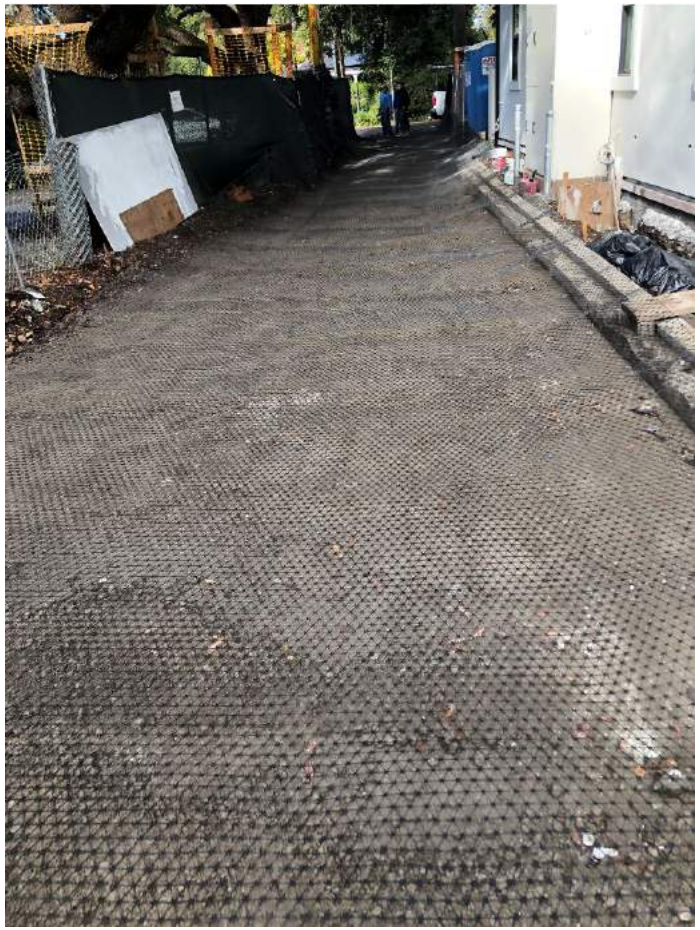
"The required protective fencing shall remain in place until final landscaping and inspection of the project. Project arborist approval must be obtained and documented in a monthly site activity report sent to the Town. A mandatory Monthly Tree Activity Report shall be sent at least once monthly to the Town planner associated with this project (smullin@losgatosca.gov) beginning with the initial tree protection verification approval letter".

1. (Continued) PROJECT ARBORIST "PA" / SPECIAL SITE MONITORING:

The PA shall work with the project team to directly monitor a portion of the following items such as, but not limited to the following:

1a. Installation of a layer of biaxial or triaxial geogrid over the soil grade surface as an underlayment for the baserock base section of the proposed new driveway, dog run, and various walkways near trees #901, 902, 905, 906, 907, 908.

The PA shall verify that proposed new driveway and walkway and dog run work "edging" involves setting materials down to existing soil surface grade elevation only, and does not involve any edging prep excavation below existing grade elevations for installation of any edging or restraints.



**Right: Image showing TriAx installation at a CTA project in Menlo Park, 2020. Baserock is placed directly over the plastic geogrid shown in the image.**

2. Project Team Pre-Project Adjustments, Clarifications, and Limits Suggested or Required:

2a. DRIVEWAYS / WALKWAYS / DOG RUN: Tensar TriAx triaxial geogrid model TX5, TX160, or TX7 (or equivalent) shall be laid over existing soil grade to avoid any excavation or grading for driveway sections, walkway sections, and dog run, **within 20 feet of trees #901, 902, 905, 906, 907, and #908.** These work items shall be constructed as "no dig, over grade" systems completely over existing soil grade, with no subbase prep or subbase recompaction.

2b. PATIO & LANDINGS / NORTH SIDE OF SITE: It is suggested that the applicant push proposed patio work and landings to at least **15 or 20 feet offset from the trunk edge of tree #910**, to avoid severe root damage and/or root loss related to baserock base section excavation and other prep work associated with these items.

2c. SPA & WIDE WALKWAY & NARROW WALKWAY: It is suggested that the applicant push the proposed spa, wide walkways, and narrow walkways to at least **12 feet offset from the trunk of tree #909** to avoid severe root loss/damage.

2d. STORM DRAIN (SD) PIPES AND BOXES: The applicant shall push proposed storm drain pipe trenches and related facilities to **at least 10 feet from trunk edge of tree #908, and 12 feet from trunk edges of trees #909, 915 and #916.**

2e. POSSIBLE ADDITIONAL TREE REMOVAL: Applicant shall consider removal of protected size **tree #921**, due to the apparent unmitigable conflicts between proposed site work within the tree's Critical Root Zone (structural root plate preservation minimum offset distance), and the existing condition rating of the tree (58%). The mitigation fee for removal would be $1,000, but this fee would be waived, given that the applicant's proposed number of new tree plantings on site would far exceed this value.

2f. OAK #924: REMOVAL AND MITIGATION: The fee for mitigation of removal of **tree #924** per applicant's plan is $1,500. However, this fee will be waived, given that the value of proposed new trees to be installed on site far exceeds the canopy replacement fee for removal of this tree.

2g. LANDSCAPE PLAN / SHEETS L3.1 & L3.2: The tree installations proposed per applicant sheet L3.1 will cause severe root loss/damage to **trees #901 and #902**. The proposed tree installations along the southwest side of the site will cause severe root loss/damage to **all trees being retained along the southwest side of the site.** There is no way to mitigate the root loss/damage to existing trees being protected in place (PIP) from planting pit digging that will occur, if the landscape plan is built out as currently proposed. This is a subject for further discussion between Town Staff and the applicant's team.

2h. LANDSCAPE IRRIGATION PIPE TRENCHING: Proposed irrigation pipe trenching is typically the single most damaging item of an entire submittal set of plans, because the trench alignments are often placed parallel to the property boundaries, in very close proximity to valuable mature oaks and other high value trees. The applicant's plan set does not include an irrigation plan sheet. Therefore, impacts from this trenching were not quantified at the time of writing. However, given the large number of trees and shrubs proposed to be installed along the property boundaries in direct conflict with large, mature high-value trees being retained both on and off site, **the CTA expects extremely severe root loss to occur around most or all trees being retained at and adjacent to this site, as a result of irrigation pipe trenching, if pipes were to be installed in-line with the current proposed tree and shrub installation locations shown on sheet L3.1 and 3.2.**

**Although it may be possible to run flexible over-grade irrigation tubing to the trees to reduce trenching impacts to existing mature trees being retained and protected on site, the root loss/damage caused by new tree planting pit installation per landscape plan sheets L3.1 and L3.2 may be nearly as severe as the pipe trenching impacts.**

**This is a subject for further discussion between Town Staff and the applicant's project team, given that the CTA has not reviewed any proposed irrigation plan sheets as of the date of writing.**

2i. ELIMINATE PROPOSED RESTROOM FACILITY / GOLFING AREA WORK / STORM DRAIN: The CTA suggests that the proposed outdoor restroom facility, storm drain pipe and associated items, and golf putting area renovation, all be eliminated within 20 feet of the trunk edge of **tree #923,** to avoid causing severe root loss/damage to this tree, and allow for erection of TPZ fencing at 15 feet to 17 feet offset from the trunk edge. If any of these three (3) proposed applicant items shown on the proposed plan set were to be built as currently shown, then the damage to the root system of tree #923 would be severe, possibly causing premature tree death and/or destabilization of the root plate.

2j. WOODEN STAIR PIER FOOTINGS: The CTA suggests that all foundation work to support the proposed wooden stairs and associated landings running from the swimming pool down through the solar array be supported using only individual small-diameter piers set in individual small diameter post holes, dug at greater than or equal to 8 feet on-center spacing between posts, for areas within 25 feet of **neighbor-owned redwood #950** (the project engineer will have to review and sign off on this general specification).

2k. NEIGHBOR OAK #951:

Applicant's project team shall **survey-plot** the accurate location of neighbor oak #951.

It is suggested that the applicant's team **push all proposed stormwater detention system-related items to an offset of at least 10 feet from the southwest property line**, to avoid causing severe root loss to the oak #951 lateral root system, which extends far into the 62 Ellenwood lot.

3. Pruning & Tree Maintenance:

3a. ISA Certified Arborist:

Retain the services of an ISA Certified Arborist to perform or directly oversee site pruning work on trees requiring airspace clearance pruning or other tree maintenance.

All pruning work on trees at this project will need to be performed directly by an ISA Certified Arborist, or under full-time on-site direct supervision of an ISA Certified Arborist.

All pruning shall conform to the most current iteration (2017) of ANSI-A300 *tree, shrub, and other woody plant maintenance / pruning* and the Best Management Practices companion pamphlet to the ANSI-A300 pruning standards, published by International Society of Arboriculture.

3b. Perform endweight reduction pruning to shorten over-extended lateral limb systems (of certain trees to be determined) by removing the outermost end portions per ANSI A300 standards.

4. New Irrigation Piping and Landscape Plantings:

4a. Review:

Provide an irrigation plan sheet to Town Staff for review. Per item #2h above in this recommendations section, all new irrigation hard PVC pipe trenching shall be offset at least 15 feet from the trunk edge of any tree being retained both on and off site.

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For areas within 15 feet of a tree being retained, use only over-grade “trenchless” systems such as flexible ½” diameter tubing that is UV-resistant and rated for installations on-grade, in order to avoid trenching which would otherwise destroy root systems of trees being retained.

If possible, eliminate all new proposed plantings within 15 feet of an existing large mature tree to be retained (e.g. trees #901, 902).

5. (Optional) Trunk Buffer Wrap Type III Protection:

Prior to demolition commencement, install trunk buffers around all trees being retained on-site:

Wrap **one (1) entire roll of orange plastic snow fencing around the trunk of each single tree**, between grade and 6 to 8 feet above grade to create a padding of at least 1 to 2 inches thickness around each tree trunk. Stand 2x4 wood boards upright, side by side, around the entire circumference of the orange plastic wraps. Affix using duct tape (do not use wires or ropes). See spec image above right showing the wooden boards correctly mounted against one entire roll of orange snow fencing, such that the wood does not actually touch the trunk at all.

6. (Required) Chain Link Fencing Type I and/or Type II Root Protection Zone (RPZ):

Prior to demolition commencement, erect chain link fencing panels set on moveable concrete block footings (see sample image below right). Wire the fence panels to iron layout stakes pounded 24 inches into the ground at the ends of each fence panel to keep the fence route stabilized and in its correct position. Do not wire the fence panels to the trunks of the trees. These panels are available commonly for rent or purchase.

Alternative Fencing / Tube Posts and Rolled Chain Link: Using a professional grade post bounder, pound 7-foot long 2-inch diameter iron tube posts 24-inches into the ground, at 6 to 10-foot spacing maximum on-center, and hang steel chain link fencing material minimum 5-feet height on the tube posts. These materials are available for purchase at many retail and wholesale construction supply houses such as Home Depot, Lowe's, Grainger's, White Cap, Harbor Freight, etc.

**Pre-construction fence routes for trees being retained within 30 feet of new work:**

**See the CTA's red dashed lines indicating chain link fence routing, on the attached tree map markup.**

This fencing must be erected prior to any heavy machinery traffic or construction material arrival on site.

The protective fencing must not be temporarily moved during construction. No materials, tools, excavated soil, liquids, substances, etc. are to be placed or dumped, even temporarily, inside the root protection zone or "RPZ".

**No storage, staging, work, or other activities will be allowed inside the RPZ except with PA monitoring.**

7. Signage: The RPZ fencing shall have one sign affixed with UV-stabilized zip ties to the chain link at eye level for every 15 linear feet of fencing, minimum 8"X11" size each, plastic laminated or printed with waterproof ink on waterproof paper, with wordage that includes the Town Code section that refers to tree fence protection requirements (wordage can be adjusted):

ASCA Registered Consulting Arborist #401 / ISA Tree Risk Assessment Qualified / ISA Certified Arborist #WE-3172A Cell: (415) 203-0990 / Email: walterslevisonjr@yahoo.com

# TREE PROTECTION ZONE FENCE
# ZONA DE PROTECCION PARA ARBOLES

## -NO ENTRE SIN PERMISO-
## -LLAME EL ARBOLISTA-

## REMOVAL OF THIS FENCE IS SUBJECT TO PENALTY ACCORDING TO LOS GATOS TOWN CODE 29.10.1025

**PROJECT ARBORIST:**

**TELEFONO CELL:** **EMAIL:**

Note: Walter Levison, Contract Town Arborist is an independent consultant working for Town of Los Gatos Planning Division Staff, and is not the “PROJECT ARBORIST”.

8. Water Spray:

   Spray off foliage of all trees **within 20 feet of construction** activity using a very high power garden hose or a pressure washer system set on low pressure to wash both the upper and lower surfaces of foliage. This helps keep the gas portals (stomata) unclogged for better gas exchange which is crucial for normal tree function.

   Spray should be applied approximately **once-monthly,** or when ambient airborne dust concentration is unusually high.

9. Tree Removal Permitting / Removal of Protected-Size Trees / Mitigation:

   **It is suggested that the Town permit the removal of oak #921, with mitigation, if work is to occur within the tree's Critical Root Zone of 20.5 feet radius offset from trunk edge, as is currently proposed. This is a subject for further discussion between Staff and the applicant's team.**


**Oak #924** will be removed per plan. Given the extensive nature of the applicant's proposed landscape plan, there are no fees required for canopy replacement.

Note, however, per the CTA's items #2g and #2h above in this Recommendations section, proposed landscape tree planting pit locations shown on the applicant's landscape plan sheet, and irrigation pipe trenching plans (not yet submitted by applicant) will have a severe negative effect on trees being retained. This is a subject for further discussion between Town Staff and the applicant's team.

New Plantings / Tree Installation Specs

Ideally, **two (2) high flow type adjustable bubblers each emitting 1/2 to 2 gallons per minute (2GPM), depending on percolation rate of planting pit,** are set over the rootball of each single tree planting, and each tree is installed with two (2) wooden planting stakes (not the shipping stake), with a set of figure-8 Cinch Ties ™ affixed per the standard spec image below right.

Note how the tree stakes are cut to just above the elevation of the Cinch-Ties to avoid abrasion between the stakes and the limbs and trunk during wind movement.

A watering berm consisting of site soil is formed around the outside edge of the rootball to force irrigation water to pool up directly over the rootball, as seen in the image at right and on the following page.

**RIGHT: Proper installation of a new 24" box size tree with two (2) high flow type ½ GPM to 2.0 GPM (gallon-per-minute) flood bubblers seen inside a steeply sloped watering berm built using site soil. The berm is built up directly over the rootball edge, which forces irrigation water directly downward into the rootball via gravity.**

10. Temporary Irrigation During Construction (If Any):

    Volume per week: **TBD.**

    Application locations: **TBD.**

    Application methods: **TBD.**

    See image at right showing a 100-foot long soaker hose setup with wood chip mulch around a large coast redwood specimen being retained during construction on a Walter Levison project. Palo Alto, California.

    Other over-grade temporary irrigation techniques can be used, including a tow-behind water tank/spray apparatus, water truck, garden hose, high flow type bubblers, etc.

## 5.0 Tree Protection and Maintenance Directions per Town Code

The following is excerpted directly from the 2015 iteration of the Town of Los Gatos tree ordinance sections which provide specific tree protection directions and limitations on root pruning and above-ground pruning:

### Sec. 29.10.1000. New property development.

(a) A tree survey shall be conducted prior to submittal of any development application proposing the removal of or impact to one or more protected trees. The development application shall include a Tree Survey Plan and Tree Preservation Report based on this survey. The tree survey inventory numbers shall correspond to a numbered metal tag placed on each tree on site during the tree survey. The tree survey plan shall be prepared by a certified or consulting arborist, and shall include the following information:

(1) Location of all existing trees on the property as described in section 29.10.0995;

(2) Identify all trees that could potentially be affected by the project (directly or indirectly- immediately or in long term), such as upslope grading or compaction outside of the dripline;

(3) Notation of all trees classified as protected trees;

(4) In addition, for trees four (4) inches in diameter or larger, the plan shall specify the precise location of the trunk and crown spread, and the species, size (diameter, height, crown spread) and condition of the tree.

(b) The tree survey plan shall be reviewed by the Town's consulting arborist who shall, after making a field visit to the property, indicate in writing or as shown on approved plans, which trees are recommended for preservation (based on a retention rating of high/moderate/low) using, as a minimum, the Standards of Review set forth in section 29.10.0990. This plan shall be made part of the staff report to the Town reviewing body upon its consideration of the application for new property development;

(c) When development impacts are within the dripline of or will affect any protected tree, the applicant shall provide a tree preservation report prepared by a certified or consulting arborist. The report, based on the findings of the tree survey plan and other relevant information, shall be used to determine the health and structure of existing trees, the effects of the proposed development and vegetation removal upon the trees, recommendations for specific precautions necessary for their preservation during all phases of development (demolition, grading, during construction, landscaping); and shall also indicate which trees are proposed for removal. The tree preservation report shall stipulate a required tree protection zone (TPZ) for trees to be retained, including street trees, protected trees and trees whose canopies are hanging over the project site from adjacent properties. The TPZ shall be fenced as specified in section 29.10.1005:

(1) The final approved tree preservation report shall be included in the building permit set of development plans and printed on a sheet titled: Tree Preservation Instructions (Sheet T-1). Sheet T-1 shall be referenced on all relevant sheets (civil, demolition, utility, landscape, irrigation) where tree impacts from improvements may be shown to occur;

(2) The Town reviewing body through its site and design plan review shall endeavor to protect all trees recommended for preservation by the Town's consulting arborist. The Town reviewing body may determine if any of the trees recommended for preservation should be removed, if based upon the evidence submitted the reviewing body determines that due to special site grading or other unusual characteristics associated with the property, the preservation of the tree(s) would significantly preclude feasible development of the property as described in section 29.10.0990;

(3) Approval of final site or landscape plans by the appropriate Town reviewing body shall comply with the following requirements and conditions of approval:

a. The applicant shall, within ninety (90) days of final approval or prior to issuance of a grading or building permit, whichever occurs first, secure an appraisal of the condition and value of all trees included in the tree report affected by the development that are required to remain within the development using the Tree Value Standard methodology as set forth in this Chapter. The appraisal of each tree shall recognize the location of the tree in the proposed development. The appraisal shall be performed in accordance with the current edition of the Guide for Plant Appraisal published by the Council of Tree and Landscape Appraisers (CTLA) and the Species and Group Classification Guide published by the Western Chapter of the International Society of Arboriculture. The appraisal shall be performed at the applicant's expense, and the appraisal shall be subject to the Director's approval.

b. The site or landscape plans shall indicate which trees are to be removed. However, the plans do not constitute approval to remove a tree until a separate permit is granted. The property owner or applicant shall obtain a protected tree removal permit, as outlined in section 29.10.0980, for each tree to be removed to satisfy the purpose of this division.

(d) Prior to acceptance of proposed development or subdivision improvements, the developer shall submit to the Director a final tree preservation report prepared by a certified or consulting arborist. This report shall consider all trees that were to remain within the development. The report shall note

the trees' health in relation to the initially reported condition of the trees and shall note any changes in the trees' numbers or physical conditions. The applicant will then be responsible for the loss of any tree not previously approved for removal. For protected trees, which were removed, the developer shall pay a penalty in the amount of the appraised value of such tree in addition to replacement requirements contained in section 29.10.0985 of this Code. The applicant shall remain responsible for the health and survival of all trees within the development for a period of five (5) years following acceptance of the public improvements of the development or certificate of occupancy.

(e) Prior to issuance of any demolition, grading or building permit, the applicant or contractor shall submit to the Building Department a written statement and photographs verifying that the required tree protection fence is installed around street trees and protected trees in accordance with the tree preservation report.

(f) If required by the Director and conditioned as part of a discretionary approval, a security guarantee shall be provided to the Town. Prior to the issuance of any permit allowing construction to begin, the applicant shall post cash, bond or other security satisfactory to the Director, in the penal sum of five thousand dollars ($5,000.00) for each tree required to be preserved, or twenty-five thousand dollars ($25,000.00), whichever is less. The cash, bond or other security shall be retained for a period of one (1) year following acceptance of the public improvements for the development and shall be forfeited in an amount equal to five thousand dollars ($5,000.00) per tree as a civil penalty in the event that a tree or trees required to be preserved are removed, destroyed or severely damaged.

(g) An applicant with a proposed development which requires underground utilities shall avoid the installation of said utilities within the dripline of existing trees whenever possible. In the event that this is unavoidable, all trenching shall be done using directional boring, air-spade excavation or by hand, taking extreme caution to avoid damage to the root structure. Work within the dripline of existing trees shall be supervised at all times by a certified or consulting arborist.

(h) It shall be a violation of this division for any property owner or agent of the owner to fail to comply with any development approval condition concerning preservation, protection, and maintenance of any protected tree.

(Ord. No. 2114, §§ I, II, 8-4-03)

## Sec. 29.10.1005. Protection of trees during construction.

(a) Protective tree fencing shall specify the following:

(1) Size and materials. Six (6) foot high chain link fencing, mounted on two-inch diameter galvanized iron posts, shall be driven into the ground to a depth of at least two (2) feet at no more than 10-foot spacing. For paving area that will not be demolished and when stipulated in a tree preservation plan, posts may be supported by a concrete base.

(2) Area type to be fenced. Type I: Enclosure with chain link fencing of either the entire dripline area or at the tree protection zone (TPZ), when specified by a certified or consulting arborist. Type II: Enclosure for street trees located in a planter strip: chain link fence around the entire planter strip to the outer branches. Type III: Protection for a tree located in a small planter cutout only (such as downtown): orange plastic fencing shall be wrapped around the trunk from the ground to the first branch with 2-inch wooden boards bound securely on the outside. Caution shall be used to avoid damaging any bark or branches.

(3) Duration of Type I, II, III fencing. Fencing shall be erected before demolition, grading or construction permits are issued and remain in place until the work is completed. Contractor shall first obtain the approval of the project arborist on record prior to removing a tree protection fence.

(4) Warning sign. Each tree fence shall have prominently displayed an 8.5 x 11-inch sign stating: "Warning—Tree Protection Zone-this fence shall

not be removed and is subject to penalty according to Town Code 29.10.1025".

(b) All persons, shall comply with the following precautions:

(1) Prior to the commencement of construction, install the fence at the dripline, or tree protection zone (TPZ) when specified in an approved arborist report, around any tree and/or vegetation to be retained which could be affected by the construction and prohibit any storage of construction materials or other materials, equipment cleaning, or parking of vehicles within the TPZ. The dripline shall not be altered in any way so as to increase the encroachment of the construction.

(2) Prohibit all construction activities within the TPZ, including but not limited to: excavation, grading, drainage and leveling within the dripline of the tree unless approved by the Director.

(3) Prohibit disposal or depositing of oil, gasoline, chemicals or other harmful materials within the dripline of or in drainage channels, swales or areas that may lead to the dripline of a protected tree.

(4) Prohibit the attachment of wires, signs or ropes to any protected tree.

(5) Design utility services and irrigation lines to be located outside of the dripline when feasible.

(6) Retain the services of a certified or consulting arborist who shall serve as the project arborist for periodic monitoring of the project site and the health of those trees to be preserved. The project arborist shall be present whenever activities occur which may pose a potential threat to the health of the trees to be preserved and shall document all site visits.

(7) The Director and project arborist shall be notified of any damage that occurs to a protected tree during construction so that proper treatment may be administered.

(Ord. No. 2114, §§ I, II, 8-4-03)

## Sec. 29.10.1010. Pruning and maintenance.

All pruning shall be in accordance with the current version of the International Society of Arboriculture Best Management Practices—Tree Pruning and ANSI A300-Part 1 Tree, Shrub and Other Woody Plant Management—Standard Practices, (Pruning) and any special conditions as determined by the Director. For developments, which require a tree preservation report, a certified or consulting arborist shall be in reasonable charge of all activities involving protected trees, including pruning, cabling and any other work if specified.

(1) Any public utility installing or maintaining any overhead wires or underground pipes or conduits in the vicinity of a protected tree shall obtain permission from the Director before performing any work, including pruning, which may cause injury to a protected tree. (e.g. cable TV/fiber optic trenching, gas, water, sewer trench, etc.).

(2) Pruning for clearance of utility lines and energized conductors shall be performed in compliance with the current version of the American National Standards Institute (ANSI) A300 (Part 1)- Pruning, Section 5.9 Utility Pruning. Using spikes or gaffs when pruning, except where no other alternative is available, is prohibited.

(3) No person shall prune, trim, cut off, or perform any work, on a single occasion or cumulatively, over a three-year period, affecting twenty-five percent or more of the crown of any protected tree without first obtaining a permit pursuant to this division except for pollarding of fruitless mulberry trees (*Morus alba)* or other species approved by the Town Arborist. Applications for a pruning permit shall include photographs indicating where pruning is proposed.

(4) No person shall remove any Heritage tree or large protected tree branch or root through pruning or other method greater than four (4) inches in diameter (12.5" in circumference) without first obtaining a permit pursuant to this division.

(Ord. No. 2114, §§ I, II, 8-4-03)

## 6.0 Tree Replacement Standards – Los Gatos Town Code

(Excerpted from Town Code 29.10.0985 and 29.10.0987)

(1) Two (2) or more replacement trees, of a species and size designated by the Director, shall be planted on the subject private property. Table 3-1 The Tree Canopy—Replacement Standard shall be used as a basis for this requirement. The person requesting the permit shall pay the cost of purchasing and planting the replacement trees.

(2) If a tree or trees cannot be reasonably planted on the subject property, an in-lieu payment in an amount set forth by the Town Council by resolution shall be paid to the Town Tree Replacement Fund to:

a. Add or replace trees on public property in the vicinity of the subject property; or

b. Add or replace trees or landscaping on other Town property; or

c. Support the Town's urban forestry management program. (Ord. No. 2114, §§ I, II, 8-4-03)

Table 3-1 - Tree Canopy - Replacement Standard

| Canopy Size of Removed Tree [1] | (Staff is using 24" box size as the Replacement Standard for SFR Projects as of 2016) [2,4] | Single Family Residential Replacement[3,4] |
|---|---|---|
| 10 feet or less | Two 24 inch box trees | Two 15 gallon trees |
| More than 10 feet to 25 feet | Three 24 inch box trees | Three 15 gallon trees |
| More than 25 feet to 40 feet | Four 24 inch box trees; or Two 36 inch box trees | Four 15 gallon trees |
| More than 40 feet to 55 feet | Six 24 inch box trees; or Three 36 inch box | Not Available |
| Greater than 55 feet | Ten 24 inch box trees; or Five 36 inch box trees | Not Available |

Notes

[1]To measure an asymmetrical canopy of a tree, the widest measurement shall be used to determine canopy size.

[2]Often, it is not possible to replace a single large, older tree with an equivalent tree(s). In this case, the tree may be replaced with a combination of both the Tree Canopy Replacement Standard and in-lieu payment in an amount set forth by Town Council resolution paid to the Town Tree Replacement Fund.

[3]Single Family Residential Replacement Option is available for developed single family residential lots under 10,000 square feet that are not subject to the Town's Hillside Development Standards and Guidelines. All 15-gallon trees must be planted on-site. Any in-lieu fees for single family residential shall be based on 24" box tree rates as adopted by Town Council.

[4]Replacement Trees shall be approved by the Town Arborist and shall be of a species suited to the available planting location, proximity to structures, overhead clearances, soil type, compatibility with surrounding canopy and other relevant factors. Replacement with native species shall be strongly encouraged. Replacement requirements in the Hillsides shall comply with the Hillside Development Standards and Guidelines Appendix A and Section 29.10.0987 Special Provisions--Hillsides.

## Sec. 29.10.0987. Special Provisions—Hillsides

The Town of Los Gatos recognizes its hillsides as an important natural resource and sensitive habitat which is also a key component of the Town's identity, character and charm. In order to maintain and encourage restoration of the hillside environment to its natural state, the Town has established the following special provisions for tree removal and replacement in the hillsides:

(1) All protected trees located 30 or more feet from the primary residence that are removed shall be replaced with native trees listed in *Appendix A Recommended Native Trees for Hillside Areas of the Town of Los Gatos Hillside Development Standards and Guidelines* (HDS&G).

(2) All protected trees located within 30 feet of the primary residence that are removed shall be replaced as follows:

(a) If the removed tree is a native tree listed in Appendix A of the HDS&G, it shall only be replaced with a native tree listed in Appendix A of the HDS&G.

(b) If the removed tree is not listed in Appendix A, it may be replaced with a tree listed in Appendix A, or replaced with another species of tree as approved by the Director.

(c) Replacement trees listed in Appendix A may be planted anywhere on the property.

(d) Replacement trees not listed in Appendix A may only be planted within 30 feet of the primary residence.

(3) Replacement requirements shall comply with the requirements in Table 3-1 Tree Canopy Replacement Standard of this Code.

(4) Property owners should be encouraged to retain dead or declining trees where they do not pose a safety or fire hazard, in order to foster wildlife habitat and the natural renewal of the hillside environment.

# 7.0 Author's Qualifications

- Continued education through The American Society of Consulting Arborists, The International Society of Arboriculture (Western Chapter), and various governmental and non-governmental entities.

- Contract Town Arborist, Town of Los Gatos, California
  Community Development Department / Planning Division
  2015-present

- Tree Risk Assessment Qualified (ISA TRAQ Course Graduate, Palo Alto, California)

- Millbrae Community Preservation Commission (Tree Board)
  2001-2006

- ASCA Registered Consulting Arborist #401

- ASCA Arboriculture Consulting Academy graduate, class of 2000

- Associate Consulting Arborist
  Barrie D. Coate and Associates
  4/99-8/99

- Contract City Arborist, City of Belmont, California
  Planning and Community Development Department
  5/99-5/20

- ISA Certified Arborist #WE-3172A

- Peace Corps Soil and Water Conservation Extension Agent
  Chiangmai Province, Thailand 1991-1993

- B.A. Environmental Studies/Soil and Water Resources
  UC Santa Cruz, Santa Cruz, California 1990

  UCSC Chancellor's Award, 1990

  (My full curriculum vitae is available upon request)

# 8.0 Assumptions and Limiting Conditions

Any legal description provided to the consultant/appraiser is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised and evaluated as through free and clean, under responsible ownership and competent management.

It is assumed that any property is not in violation of any applicable codes, ordinance, statutes, or other government regulations.

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

The consultant/appraiser shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.

Unless required by law otherwise, the possession of this report or a copy thereof does not imply right of publication or use for any other purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant/appraiser.

Unless required by law otherwise, neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed conclusions, identity of the consultant/appraiser, or any reference to any professional society or institute or to any initiated designation conferred upon the consultant/appraiser as stated in his qualifications.

This report and any values expressed herein represent the opinion of the consultant/appraiser, and the consultant's/appraiser's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

Sketches, drawings, and photographs in this report, being intended for visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys unless expressed otherwise. The reproduction of any information generated by engineers, architects, or other consultants on any sketches, drawings, or photographs is for the express purpose of coordination and ease of reference only. Inclusion of said information on any drawings or other documents does not constitute a representation by Walter Levison to the sufficiency or accuracy of said information.

Unless expressed otherwise:
a. information contained in this report covers only those items that were examined and reflects the conditions of those items at the time of inspection; and
b. the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

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

*Arborist Disclosure Statement*:

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. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Tree are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborist cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning, and 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 other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

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

## 9.0 Certification

I hereby certify that all the statements of fact in this report are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

Signature of Consultant

## 10.0 Digital Images

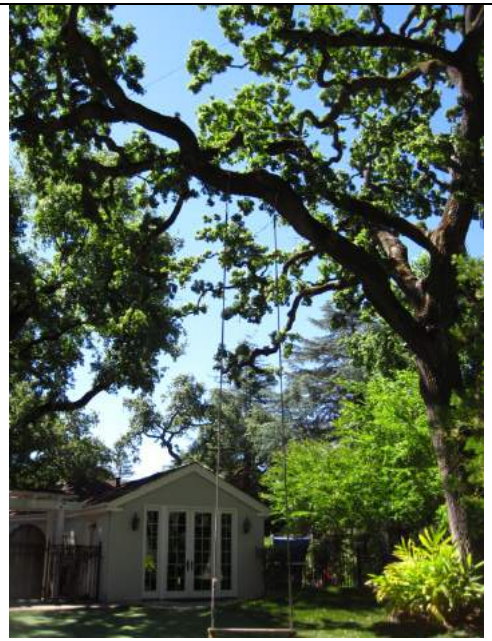
Below: Digital Images by the CTA archived 5/27/2020

| Tag # | Image | Tag # | Image |
|---|---|---|---|
| 901 |  | 901 |  |

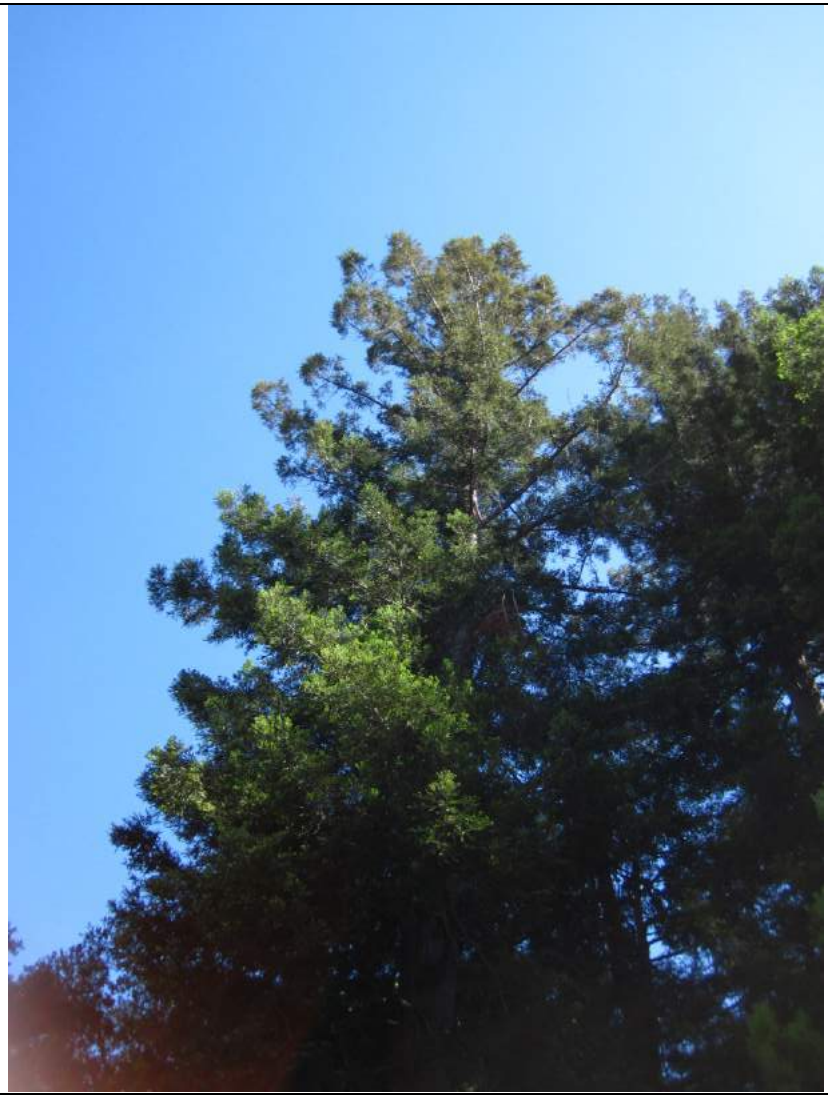
| | | | |
|---|---|---|---|
| 902 |  | 905, 906, 907, 908 |  |

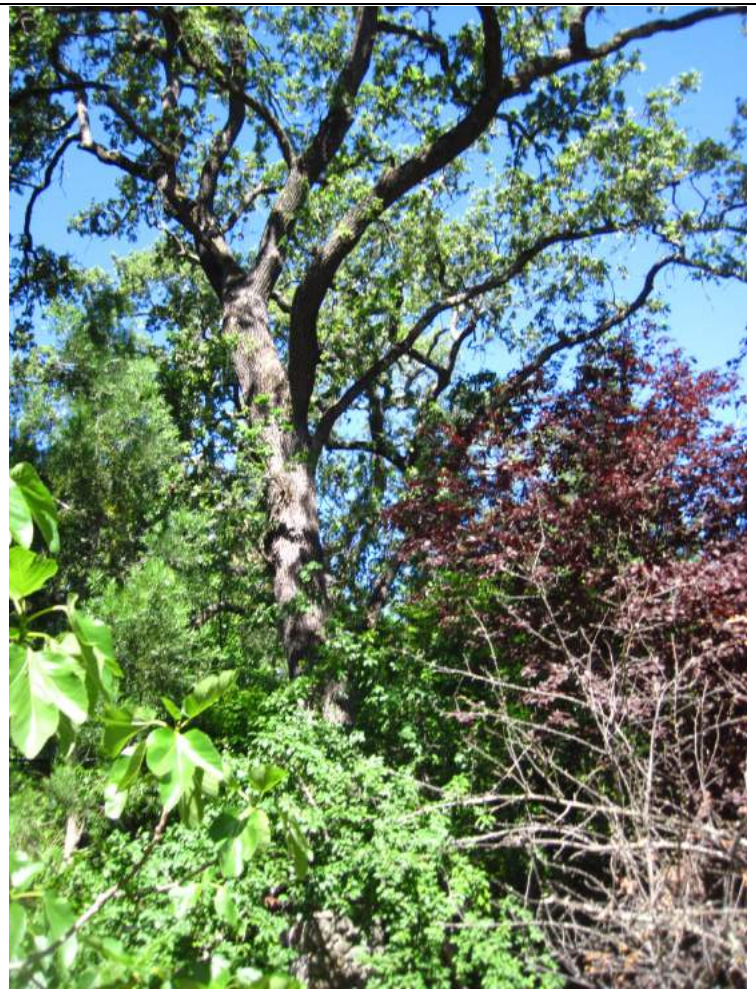
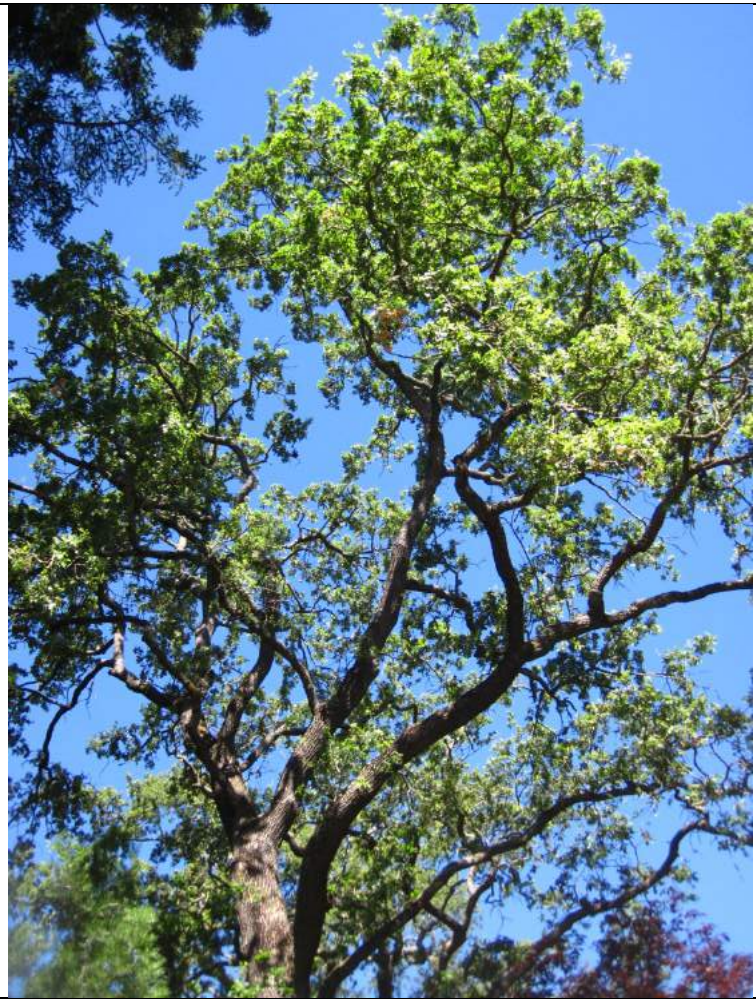
| | | | |
|---|---|---|---|
| 909 |  | 909 |  |
| 910 |  | 910 |  |

| | | | |
|---|---|---|---|
| 915 |  | 916 |  |
| 921 |  | 921 |  |

| | | | |
|---|---|---|---|
| 923 |  | 924 |  |
| 924 |  | 925 |  |

| | | | |
|---|---|---|---|
| 925 |  | 925 |  |

| | | | |
|---|---|---|---|
| 950 |  | 950 |  |

| | | | |
|---|---|---|---|
| 951 |  | 951 |  |

# 11.0 Tree Data Table

**NOTE 1: Fruit and nut trees measuring less than 18" diameter (total of all mainstems), including fruiting olive trees, both on the site and on adjacent neighbor properties are excluded from the CTA's tree studies as "exemption trees" per the Town tree ordinance.**

**NOTE 2: Tree conservation suitability ratings (CSR) are now based on the 2016 version of *Best Management Practices: Managing Trees During Construction, 2nd Edition,* published by the International Society of Arboriculture. These ratings are linked to tree health, desirability, distance between tree trunk edges and construction impacts such as root cuts and graded fill soil as shown on the applicant's current-proposed set of plan sheets, species' tolerance to construction impacts, etc. See the worksheet at the end of this data table for the full breakdown of TCS rating determinations and definitions.**

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 901 | *Quercus lobata* | Valley oak | 24.7 | -- | -- | 24.7 | 50/50 | 60/60 | 60% Fair | | X | Mod | South | | | X | Root crown decayed on north side to unknown degree. | TBD | TPZ fencing, Root Crown Excavation, and Eliminate Base Section Excavation within 20 feet. |
| 902 | *Quercus lobata* | Valley oak | 23.1 | -- | -- | 23.1 | 45/55 | 75/75 | 75% Good | | X | Mod | South | South | | | Root system causing severe driveway buckling. Roots assumed shallow elevation. | TBD | TPZ fencing, Root Crown Excavation, and Eliminate Base Section Excavation within 20 feet |
| 905 | *Cedrus deodara* | Deodar cedar | Est. 18 | -- | -- | Est. 18 | 75/45 | 80/80 | 80% Good | | X | Poor | | | | | Limbs extend over driveway some 25 feet elevation above grade. | TBD | TPZ fencing, and keep all new dog run artificial turf install over-grade, with zero excavation for baserock base. |

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 906 | *Cedrus deodara* | Deodar cedar | Est. 18 | -- | -- | Est. 18 | 80/25 | 70/60 | 67% Good | | X | Poor | | | | | | TBD | TPZ fencing, and keep all new dog run artificial turf install over-grade, with zero excavation for baserock base. |
| 907 | *Cedrus deodara* | Deodar cedar | Est. 18 | -- | -- | Est. 18 | 75/25 | 70/40 | 55% Fair | | X | Poor | | | | | | TBD | TPZ fencing, and keep all new dog run artificial turf install over-grade, with zero excavation for baserock base. |

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 908 | *Cedrus deodara* | Deodar cedar | Est. 15 | -- | -- | Est. 15 | 75/25 | 70/60 | 65% Good | | X | Mod | | | | | | TBD | TPZ fencing, push proposed new storm drain (SD) to 10 feet offset, and use Tensar TriAx geogrid for walkway construction to allow baserock base section to be floated over existing grade, avoiding excavation into root zone of tree. |

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 909 | *Quercus agrifolia* | Coast live oak | 24.0 | -- | -- | 24.0 | 50/35 | 85/65 | 73% Good | | X | Poor | | | | X | Tree has been limbed up on residence side. Lowest branch is 25 feet elev. | TBD | TPZ fencing<br><br>Root crown excavation<br><br>Push storm drain (SD) to 12 feet offset.<br><br>Push spa to 12 feet offset.<br><br>Push the wide walkway to 12 feet offset.<br><br>Keep narrow walkway construction over grade by using Tensar TriAx geogrid over (e) soil surface. |
| 910 | *Quercus agrifolia* | Coast live oak | 32.0 | -- | -- | 32.0 | 55/45 | 85/60 | 70% Good | | X | Poor | SE | SE | X | | Large diameter limbs were removed on residence side. Lowest limb is now 27 feet elevation. | TBD | TPZ fencing.<br><br>Relocate the proposed landings and proposed patio surround to 15 or 20 feet offset from trunk. |

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 915 | *Betula pendula* | European birch | 9.0 | -- | -- | 9.0 | 40/16 | 80/70 | 74% Good | | X | Good | | | | | Storm drain (SD) proposed alignment encroaches near to trunk. | TBD | TPZ fencing.<br><br>Push proposed SD trench to 12 feet offset from trunk. |
| 916 | *Quercus lobata* | Valley oak | 10.1 | -- | -- | 10.1 | 45/20 | 60/60 | 60% Fair | | X | Good | East | | | | Storm drain (SD) proposed alignment encroaches near to trunk. | TBD | TPZ fencing.<br><br>Push proposed SD trench to 12 feet offset from trunk. |
| 921 | *Pseudotsuga menziesii* | Douglas fir | 41.0 | -- | -- | 41.0 | 105/40 | 65/55 | 58% Fair | ? | | Poor | | | | | Tree was limbed up to remove all of the lower elevation scaffold limbs.<br><br>Tree may not be worth redesign of proposed plans to work around root system. | TBD | Given that the proposed site work as shown on the current plans will encroach within the Critical Root Zone, it is not clear if there is any option other than 'removal of tree' at this point. |

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 923 | *Quercus lobata* | Valley oak | 35.5 | 24.1 | -- | 59.6 | 65/60 | 55/40 | 45% Fair | | X | Poor to Mod | | | | | Existing golf putting area near this tree.<br><br>Canopy has been liontailed to remove inner and lower live wood and foliage: a practice that does not conform to the ANSI A300 (U.S.) pruning standards. Multiple cables are visible in tree. Open decay cavities are visible throughout the canopy, resulting from decay initiated at old pruning cut wounds. Therefore, it is going to be very difficult to manage this tree for long term safety. | Critical Root Zone (CRZ) is roughly 18 feet offset radius. | TPZ fencing should be erected at least 15 to 17 feet offset from the trunk edge of tree: the approx. Critical Root Zone offset radius from trunk edge.<br><br>CTA suggests eliminating proposed renovation plans for the existing golfing area.<br><br>Eliminate proposed outdoor restroom facility.<br><br>Eliminate proposed storm drain (SD) pipe trench at west side of property.<br><br>Elimination of all three (3) of the above items should allow for protection of the CRZ. |

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 924 | *Quercus lobata* | Valley oak | 39.8 | -- | -- | 39.8 | 65/55 | 65/45 | 50% Fair | X | | n/a | | | | | Tree to be removed per applicant's plan.<br><br>Arborist cables were installed in the past.<br><br>Age of (e) residence foundation footing = unknown. Assumed +/- 100 years. | n/a | n/a |
| 925 | *Quercus lobata* | Valley oak | 25.2 | -- | -- | 25.2 | 50/45 | 35/35 | 35% Poor | | X | Poor | South | Tree root crown appears buried (not able to be assessed due to tree pit).<br><br>Past construction around this tree has destroyed the majority of its root system. Expected remaining lifespan is 10 to 15 years, even if no new construction were to occur. | | | | As far as possible offset from trunk edge. | RPZ fence erection. |
| 950 | *Sequoia sempevirens*<br><br>*NEIGHBOR TREE* | Coast redwood | Est. 28 | -- | -- | Est. 28 | 105/25 | 50/50 | 50% Fair | | X | Good | | | | | Trunk appears to be +_/- 3 feet offset from property line. | TBD | Remove any "continuous" footings proposed for within 15 feet of the tree. Use only small diameter pier hole post supports for proposed wooden stairs. |

| Tree Tag Number | Genus & Species | Common Name | Trunk1 Diameter | Trunk2 Diameter | Trunk3 Diameter | Sum of All Trunk Diameters | Height & Canopy Spread (Ft.) | Health & Structural Rating (100% Each) | Overall Condition Rating (0 to 100%) | (R)emove Tree | (S)ave Tree | Tree Conservation Suitability Ratings (TCS) | Lopsided Canopy (note direction) | Trunk Lean (note direction) | Girdling Roots | Root Flares Buried in Fill Soil | Pests and Disease Presence, and Other Notes | SUGGESTED ROOT PROTECTION FENCE RADIUS (Ft.) | MAINTENANCE AND PROTECTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 951 | *Quercus lobata*<br>*NEIGHBOR TREE* | Valley oak | Est. 26 | -- | -- | Est. 26 | 75/70 | Est. 60/60 | Est. 60% Fair | | X | Mod | | | | | Root crown not assessed.<br>Canopy extends 25 to 30 feet into the 62 Ellenwood property airspace. | TBD | TPZ fencing at the proposed new retaining wall.<br>Applicant will need to accurately plot this tree on plan sheets so that impacts can be better assessed by Town Staff.<br>Push proposed stormwater detention items to 9 or 10 feet east of the property line, to allow for TPZ fence erection adjacent to the new retaining wall location. |

**Overall Tree Condition Ratings / Breakdown of Numeric Ranges (New, Per *Guide for Plant Appraisal, 10th Edition*):**

**00 - 05% = Dead**
**06 - 20% = Very Poor**
**21 – 40% = Poor**
**41 – 60% = Fair**
**61 – 80% = Good**
**81 – 100% = Exceptional**

# Tree Conservation Suitability (TCS) Ratings[1]

A tree's suitability for conservation is determined based on its health, structure, age, species and disturbance tolerances, proximity to proposed cutting and filling, proximity to proposed construction or demolition, and potential longevity, using a scale of good, fair, or poor (Fite, K, and Smiley, E. T., 2016). The following list defines the rating scale. Note that if proposed site work can be offset to farther linear distances from a tree's trunk edge, a tree's TCS rating may be elevated by one rating tier, given that there would be a corresponding reduction in expected future root zone impacts.

| TPS Ratings | Range of values | |
|---|---|---|
| **Good** | **80-100** | Trees with good health, good structural stability and good expected longevity after construction. |
| **Moderate** | **60-79** | Trees with fair health and/or structural defects that may be mitigated through treatment. These trees require more intense management and monitoring, before, during, and after construction, and may have shorter life expectancy after development. |
| **Poor** | **<59** | Trees are expected to decline during or after construction regardless of management. The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site. |

## TCS Ratings Worksheet Factors (Total Possible: 100 Points)

| |
|---|
| **Health (1-15)** |
| **Root Cut/Fill Distance from Trunk (1-15)** |
| **Structure Defects (1-15)** |
| **Construction Tolerance of the tree species (1-15)** |
| **Age relative to typical species lifespan (1-10)** |
| **Location of construction activity (1-10)** |
| **Soil quality/characteristics (1-10)** |
| **Species desirability (1-10)** |

[1] Derived from Fite and Smiley, 2016. *Best Management Practices: Managing Trees During Construction, 2nd Edition*. International Society of Arboriculture.

# Tree Maintenance and Protection Codes Used in Data Table:

RPZ: Root protection zone fence, chain link, with 2" diameter iron posts driven 24" into the ground, 6 to 8 feet on center max. spacing. Alternative material: chain link fence panels set over concrete block-type footings, with the fence panels wired to steel pins pounded 24 inches into the ground at both ends of each panel.

RB: Root buffer consisting of wood chip mulch lain over existing soil as a 12 inch thick layer, overlain with 1 inch or greater plywood strapped together with metal plates. This root buffer or soil buffer should be placed over the entire width of the construction corridor between tree trunks and construction.

RP: Root pruning. Prune woody roots measuring greater than or equal to 1 inch diameter by carefully back-digging into the soil around each root using small hand tools until an area is reached where the root is undamaged. Cleanly cut through the root at right angle to the root growth direction, using professional grade pruning equipment and/or a Sawzall with wood pruning blade. Backfill around the cut root immediately (same day), and thoroughly irrigate the area to saturate the uppermost 24 inches of the soil profile.

BDRP: Back-dig root pruning: Hand-dig around the broken root, digging horizontally into the open soil root zone until a clean, unbroken, unshattered section of the root is visible. Proceed as per 'root pruning'.

RCX: Root crown excavation. Retain an experienced ISA-Certified arborist to perform careful hand-digging using small trowels or other dull digging tools to uncover currently-buried buttress root flares. Digging shall occur between trunk edge and at least two (2) feet horizontal from trunk edge. The final soil elevation will be at a level such that the tree's buttress roots visibly flare out from the vertical trunk.

TB: Trunk buffer consists of 20-40 wraps of orange plastic snow fencing to create a 2 inch thick buffer over the lowest 8 feet of tree trunk (usually takes at least an entire roll of orange fencing per each tree). Lay 2X4 wood boards vertically, side by side, around the entire circumference of the trunk. Secure buffer using duct tape (not wires).

F: Fertilization with slow-release Greenbelt 22-14-14 tree formula, as a soil injection application using a fertilizer injection gun. This brand and formulation is commonly used by reputable tree care companies in the Bay Area. Apply at label rate and injection hole spacing.

M: 4-inch thick layer of chipper truck type natural wood chips (example source: Lyngso Garden Supply, self pick-up). Do not use bark chips or shredded redwood bark.

W: Irrigate using various methods to be determined through discussion with General Contractor. Irrigation frequency and duration to be determined through discussion and/or per directions in this report. Native oak species typically require 1x/month irrigation, while other tree species tend to prefer 2x/month or 4x/month moderate to heavy irrigation during construction.

P: Pruning per specifications noted elsewhere. All pruning must be performed only under direct site supervision of an ISA Certified Arborist, or performed directly by an ISA Certified Arborist, and shall conform to all current ANSI A300 standards.

MON: A Project Arborist must be present to monitor specific work as noted for each tree.

## 12.0 Attached: Appraisal Worksheet by the CTA

This appraisal worksheet was prepared using the 10th edition of the Guide for Plant Appraisal, 2nd Printing (2019). The dollar values of each survey tree derived from these calculations are useful in helping determine the monetary fines for construction team violations of the Town of Los Gatos tree ordinance, and for other Town Staff purposes. For instance, if a tree is found by an ISA Certified Arborist (e.g. the Project Arborist, or the Contract Town Arborist) to be "50% damaged" in terms of below and/or above-ground losses to structure and/or health (vigor), the fine assessed on the construction team might be calculated as 50% of the tree's appraised dollar value.

## 13.0 Attached: Tree Location & Protection Fence Map Mark-up by the CTA

The CTA marked up the applicant's sheet L0.0 dated 4/23/2020 which is an amalgamated proposed site plan/landscape plan sheet. This markup is attached to the end of this report as a PDF markup using Adobe Pro, and the markups by the CTA may not be visible unless the viewer opens the document using Adobe Pro or Adobe CS.

The CTA added the following items to this sheet for reference purposes:

a. Tree tag numbers are noted in black numeric oversized type.

b. Tree plot dots are in some cases blackened for clarity. The locations of **neighbor trees #950 and #951** were rough-plotted by the CTA, as they were not surveyed by the applicant's survey team.

c. Canopy driplines for the two neighbor trees were drawn out by the CTA to approximate scale, using black clouding.

d. Red dashed lines indicate chain link fencing tree root protection zones or root protection zones (TPZ or RPZ). However, as noted by the CTA on the tree map markup, the current available locations for TPZ fencing are not adequate to allow for root preservation or protection, given the current proposed extent of site work indicated on the applicant's set of plans dated 4/23/2020. Most of the "Critical Root Zone" minimum required construction offset distances for protection of trees' structural root plates will be violated, if the proposed plans are built out as currently proposed by the applicant.

Walter Levison
CONSULTING ARBORIST

# Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition* , 2nd Printing (2019)
# "Functional Replacement Method / Trunk Formula Technique"
6/3/2020
62 Ellenwood, Los Gatos, CA

| | | | | | | | | Depreciation Factors | | | | | Line 9 | | Line 10 | Line 11 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tree Tag # | Name (Initials) | WCISA Speces Group Classification Booklet Page | Health (Weighted 0.15) | Structure (Weighted 0.70) | Form (Weighted 0.15) | Overall Condition Rating (OCR) "Weighted Method" | Diameter Inches at 4.5 ft. Above Grade | Functional Limitations | External Limitations | WCISA Species Group Number | Trunk Square Inches for Replacement-Size Specimen of This Species | Average SF Bay Area Cost of 24 Inch Box Tree (2019) | (UTC) Unit Tree Cost per Sq Inch (M Divided by L) | Trunk Area (TA) ((dia. x dia.) x 0.785) | Basic Functional Replacement Cost (BFRC) = (OxN) | Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ | Rounded-off Appraised Values |
| **901** | Ql | 31 | 0.55 | 0.6 | 0.7 | 61% | 24.7 | 70% | 90% | 2 | 2.24 | $250.00 | $111.61 | 478.92 | $ 53,451 | $ 20,457 | **$20,500** |
| **902** | Ql | 31 | 0.75 | 0.75 | 0.6 | 73% | 23.1 | 70% | 90% | 2 | 2.24 | $250.00 | $111.61 | 418.88 | $ 46,750 | $ 21,427 | **$21,400** |
| **905** | Cd | 8 | 0.8 | 0.8 | 0.75 | 79% | 27 | 50% | 90% | 3 | 3.8 | $250.00 | $65.79 | 572.27 | $ 37,649 | $ 13,427 | **$13,400** |
| **906** | Cd | 8 | 0.7 | 0.6 | 0.65 | 62% | 18 | 50% | 90% | 3 | 3.8 | $250.00 | $65.79 | 254.34 | $ 16,733 | $ 4,687 | **$4,690** |
| **907** | Cd | 8 | 0.7 | 0.4 | 0.7 | 49% | 18 | 50% | 90% | 3 | 3.8 | $250.00 | $65.79 | 254.34 | $ 16,733 | $ 3,690 | **$3,690** |
| **908** | Cd | 8 | 0.7 | 0.6 | 0.7 | 63% | 15 | 50% | 90% | 3 | 3.8 | $250.00 | $65.79 | 176.63 | $ 11,620 | $ 3,294 | **$3,290** |
| **909** | Qa | 30 | 0.85 | 0.65 | 0.8 | 70% | 24 | 60% | 90% | 3 | 3.8 | $250.00 | $65.79 | 452.16 | $ 29,747 | $ 11,285 | **$11,300** |
| **910** | Qa | 30 | 0.85 | 0.65 | 0.65 | 68% | **adjusted trunk area used for calculation** | 60% | 90% | 3 | 3.8 | $250.00 | $65.79 | 788.00 | $ 51,842 | $ 19,036 | **$19,000** |

Walter Levison
CONSULTING ARBORIST

# Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition* , 2nd Printing (2019)
# "Functional Replacement Method / Trunk Formula Technique"
6/3/2020
62 Ellenwood, Los Gatos, CA

| | | | | | | | | Depreciation Factors | | | | | Line 9 | | Line 10 | Line 11 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tree Tag # | Name (Initials) | WCISA Speces Group Classification Booklet Page | Health (Weighted 0.15) | Structure (Weighted 0.70) | Form (Weighted 0.15) | Overall Condition Rating (OCR) "Weighted Method" | Diameter Inches at 4.5 ft. Above Grade | Functional Limitations | External Limitations | WCISA Species Group Number | Trunk Square Inches for Replacement-Size Specimen of This Species | Average SF Bay Area Cost of 24 Inch Box Tree (2019) | (UTC) Unit Tree Cost per Sq Inch (M Divided by L) | Trunk Area (TA) ((dia. x dia.) x 0.785) | Basic Functional Replacement Cost (BFRC) = (OxN) | Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ | Rounded-off Appraised Values |
| **915** | Bp | 6 | 0.8 | 0.7 | 0.7 | 72% | 9 | 65% | 90% | 3 | 3.8 | $250.00 | $65.79 | 63.59 | $ 4,183 | $ 1,750 | **$1,750** |
| **916** | Ql | 31 | 0.6 | 0.6 | 0.6 | 60% | 10.1 | 65% | 90% | 2 | 2.24 | $250.00 | $111.61 | 80.08 | $ 8,937 | $ 3,137 | **$3,140** |
| **921** | Pm | 29 | 0.65 | 0.5 | 0.85 | 58% | **adjusted trunk area used for calculation** | 65% | 90% | 4 | 4.75 | $250.00 | $52.63 | 1191.00 | $ 62,684 | $ 21,085 | **$21,100** |
| **923** | Ql | 31 | 0.55 | 0.4 | 0.55 | 45% | **adjusted trunk area used for calculation. Amalgamation of two mainstems** | 60% | 90% | 2 | 2.24 | $250.00 | $111.61 | 1380.00 | $ 154,018 | $ 37,010 | **$37,000** |
| **924** | Ql | 31 | 0.65 | 0.45 | 0.65 | 51% | **adjusted trunk area used for calculation** | 50% | 90% | 2 | 2.24 | $250.00 | $111.61 | 1146.00 | $ 127,902 | $ 29,353 | **$29,400** |
| **925** | Ql | 31 | 0.35 | 0.35 | 0.65 | 40% | 25.2 | 40% | 90% | 2 | 2.24 | $250.00 | $111.61 | 498.51 | $ 55,637 | $ 7,912 | **$7,900** |
| **950** | Ss | 34 | 0.45 | 0.45 | 0.8 | 50% | 28 | 60% | 80% | 4 | 4.75 | $250.00 | $52.63 | 615.44 | $ 32,392 | $ 7,813 | **$7,800** |

Walter Levison
CONSULTING ARBORIST

# Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition* , 2nd Printing (2019)
# "Functional Replacement Method / Trunk Formula Technique"
# 6/3/2020
# 62 Ellenwood, Los Gatos, CA

| | | | | | | | | Depreciation Factors | | | | | Line 9 | | Line 10 | Line 11 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tree Tag # | Name (Initials) | WCISA Speces Group Classification Booklet Page | Health (Weighted 0.15) | Structure (Weighted 0.70) | Form (Weighted 0.15) | Overall Condition Rating (OCR) "Weighted Method" | Diameter Inches at 4.5 ft. Above Grade | Functional Limitations | External Limitations | WCISA Species Group Number | Trunk Square Inches for Replacement-Size Specimen of This Species | Average SF Bay Area Cost of 24 Inch Box Tree (2019) | (UTC) Unit Tree Cost per Sq Inch (M Divided by L) | Trunk Area (TA) ((dia. x dia.) x 0.785) | Basic Functional Replacement Cost (BFRC) = (OxN) | Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ | Rounded-off Appraised Values |
| **951** | QI | 31 | 0.55 | 0.55 | 0.8 | 59% | 26 | 60% | 90% | 2 | 2.24 | $250.00 | $111.61 | 530.66 | $ 59,225 | $ 18,789 | **$18,800** |

Notes:
1. (NEWLY REVISED) OVERALL CONDITION RATING RANGE per the new 10th edition, 2nd Printing, of *Guide for Plant Appraisal* (2019):
**Excellent: 81-100%**
**Good: 61-80%**
**Fair: 41-60%**
**Poor: 21-40%**
**Very Poor: 6-20%**
**Dead: 0-5%**

2. MULTI STEM TREES: For trees with multiple mainstems, the total of all mainstem cross sectional areas was used as the "trunk area" calculation. For trees with mainstems larger than 30 inches diameter each, an "adjusted trunk area" or "ATA" value is used, from a table of values in the older 9th edition of the *Guide for Plant Appraisal.* The ATA value is smaller than the actual trunk diameter, and brings the tree's appraised dollar value down to a more "reasonable" level.

3. NEIGHBOR TREES: For neighbor-owned trees that were not accessible by the CTA, the trunk diameter was estimated from a distance to the best of the CTA's ability.

4. CONDITION RATINGS / APPRAISAL TABLE VS. DATA TABLE: Because of the new appraisal methods outlined in the 2019 edition of the Guide for Plant Appraisal, 10th edition 2nd printing, the condition ratings calculated in the "Overall Condition Rating / Weighted Method" column, and the data noted in the health and structure columns of this spreadsheet (with calculations embedded), may in some cases be slightly different from data in the CTA's arborist report tree data table. The CTA attempted to keep overall condition rating values as consistent as possible between the two data tables (i.e. the appraisal data table and the tree data table in the arborist report).

| | | | |
|---|---|---|---|
| | | **Total Appraised Value of All Study Trees** | **$224,160** |

Walter Levison, Contract Town Arborist 6/3/2020

Markup of Sheet L0.0 Dated 4/23/2020 Showing

Sixteen (16) Protected-Status Trees

(Both on and Adjacent to the 62 Ellenwood Property)

Scale Bar at Right:

20 Feet in Length

(Landscape Architect

Scale Bar is Not Correct)

#950 Neighbor's

Coast Redwood

(Rough Plot Location)

#951 Neighbor

Valley Oak

(Rough Plot Location)

#909

#907

#908

#906

#905

#910

#915

#916

#902

#901

#925

#924

#921

#923

PROPERTY LINE

PHOTOVOLTAIC AND THERMAL SOLAR PANEL

POOL

POOL TERRACE

MAIN HOUSE

AUTO-COURT

ELLENWOOD AVE.

Red dashed lines indicate the only Tree Root Protection Zone (RPZ or TPZ) fence routes available to erect fencing, given the current proposed plans received by Town of Los Gatos planning division Staff. The routes shown will not provide adequate root protection for the trees. See the arborist report for analysis of construction-related impacts to trees expected to occur as a result of applicant-proposed site work.

North