

APPENDIX B

Tree Inventory & Pre-Construction Report

Certified Arborist's Tree Inventory & Pre-Construction Report

... responding to City Planners' Comment Letter dated February 11, 2019

April 09, 2019

Prepared for:

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jdhaalandconstruction.com

Contact:

Angela & Greg

Site:

Prior 76 Gas Station
4350 El Camino Real
Los Altos, CA 94022

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1.0 Assignment & Introduction

I have been retained by Angela and Greg Galatolo as the Project Arborist to provide a Pre-Construction Tree Inventory and Arborist's Report for their five-story residential project at 4350 El Camino Real in Los Altos. They are replacing a “76 Gas Station” with five floors of residential plus two levels of below ground parking.

I received a 27-page set of drawings (cover dated 12/19/2018). I have added my tree inventory numbers to Sheet C1.0 (Existing Conditions Plan) and included it in this report. The owners also sent me page 5 of the City Planners’ comment letter dated February 11, 2019 asking for such details as an inventory of all 4388-neighbor’s trees.

2.0 Discussion with leading summary

2.1 Summary

Twenty-eight (28) trees are associated with this property – three (3) on this parcel, and two (2) municipal street trees. The remaining twenty-three (23) are neighbor’s trees, just across the fence, at 4388 El Camino Real.

Tree Summary Chart		4350 El Camino Real, Los Altos					
							4/9/2019
Tree #	Common Name	Diam.	Condition	Remove*	Keep*	Protected*	Brief Comments
1 & 5	Mayten & London-Plane	4", 8"	Good		K	N	Municipal street trees to remain "as is".
2 to 4	Hollywood Junipers	6", 11", 7"	Poor	R		N	Three severely pruned ... look like shrubs planted in perimeter landscape strips. Must be removed as all three are in the excavation footprint.
6 to 28	16 Crape Myrtles, 3 Canary Isl. Pines, 4 Brisbane Box	9.2"	Mostly Fair		K	N	Inter-planted on adjacent site (4388) as a perimeter screen planting; 4' average distance across the property line fence.

Overall Condition Chart		
Percentage Range	Text Description	Quantity
0%	DEAD	0
1% to 25%	Very Poor	0
26% to 49%	Poor	3
50 % to 70%	Fair	21
71% to 90%	Good	4
91% to 100%	Excellent	0
		28



This project provides below ground parking as close as 5'8" to the northeast property line, per Garage Plans Sheet 2.0 and at 7'10" and 10'11" to the southwest and southeast corners. Even if allowing for over-excavation for workspace ("elbow room") that allows the majority of neighboring tree roots to remain intact/functional. Realistically, to stabilize the vertical garage cut, one would expect techniques such as soil-nailing and/or shotcrete to be used rather than an OSHA bench cut or slope – but it is too early in the process for that methodology to have been decided yet. At any rate, those dimensions have a high likelihood of allowing survival for those trees across the fence.

The two municipal street trees (#1 Mayten and #5 London-Plane) are included here for completeness, but can be expected to easily survive this construction project without special precautions like enclosing with tree protection fencing.

The main tree challenge may be when starting the excavation for the basement parking. Use caution to carefully sever neighbor tree roots cleanly to minimize damage to critically necessary root systems. The TPMs (Tree Protection Measures) called out below (Section 4), call for exposing tree roots with hand-digging methods after an excavator encounters 2-inch diameter roots so they can be hand cut with a Sawz-All[®].

I can provide more project-specific tree protection measures (TPMs) if plans change. Meanwhile, I include introductory TPMs herein. Usually mature trees are growing at or near most construction sites so that more extensive TPMs are typically required.

2.2 Discussion

All work appears to be sufficiently distant so that no noticeable impacts will be expected other than required removal of #2, #3, and #4 (Hollywood Junipers), already noted in the excavation footprint and called out for removal above in Section 2.1.

Per Summary above, the street trees and neighbor's trees to remain are not significantly at risk due to root loss if care is taken during the start of the excavation (upper 2' of soil) so any roots encountered are severed cleanly.

Since a drainage inlet was observed and noted on the neighbor's property only 4' from the base of their Crape Myrtle tree #8, that raises the question that they may have excavation(s) on their property already delimiting their trees' root growth/development. So it is possible that our excavation will have no impact at all on the neighbor's trees.

I include first round typical basic tree protection measures (TPMs) below. There is really no reason in the instant case to call for the typical construction site tree protection fencing (TPF) or wood chip buffer.

3.0 Site Plan, Tree Data, & Data Legend

3.1 Plan, with tree numbers added



Tree #	Name, Common (Genus species)	dbh (Diameter at Breast Height)	Trunk Circumf.	Av. Crown Radius	Height	% Vigor	% Structure	% Overall	Age / Longevity	Aptitude to Preserve	Additional Comments	Keep or Rem.	Protected Tree?
1	Mayten (<i>Maytenus boaria</i>)	4.3"	13.5"	6'	12'	75%	60%	66% Good	Young	Muni-ST	Municipal street tree (ST) in 4'x4' sidewalk cutout, 10' beyond property line, 3' to neighbor's (4388 ECR) driveway apron for garbage truck access. Still staked with unneeded stake currently causing rubbing wound defect.	Keep	ST, but <48"
2	Juniper, Hollywood (<i>Juniperus chinensis 'Torulosa'</i>)	6.4" @ 2'	20.1" @ 2'	6'	7'	40%	40%	40% Poor	Over-mature	In Foot-print	History of severe pruning by gardeners -- located on Los Altos Avenue, 11' BOC (back of curb) in 3' planter strip with star jasmine.	In Foot-print	No <48"
3	Juniper, Hollywood (<i>Juniperus chinensis 'Torulosa'</i>)	11.1 @ 6"	34.9 @ 6"	5'	8'	35%	35%	35% Poor	Over-mature	In Foot-print	History of severe pruning by gardeners -- located on by bus stop on ECR, 12' BOC (back of curb) in 3' planter strip.	In Foot-print	No <48"
4	Juniper, Hollywood (<i>Juniperus chinensis 'Torulosa'</i>)	7.4" @ 3'	23.2" @ 3'	5'	9'	35%	35%	35% Poor	Over-mature	In Foot-print	History of severe pruning by gardeners -- located on by bus stop on ECR, 12' BOC (back of curb) in 3' planter strip.	In Foot-print	No <48"
5	London-Plane (<i>Platanus acerifolia</i>)	8.0"	25.12"	12'	27'	70%	80%	75% Good	Mature	Muni-ST	Municipal street tree (ST) in 2'x3' sidewalk cutout, 16' beyond property line and driveway apron into 4388 gas station. Already at this time, numerous trunk wounds from ground level up to 3' (cankered, but growing callus).	Keep	ST, but <48"
6	Crape Myrtle (<i>Lagerstroemia indica</i>)	6.2"	19.5"	10'	25'	75%	80%	77% Good	Mature	N	Neighbor's tree, 9' to property line curb beside gas station, 19' BOC (ECR).	Keep	N's, but <48"
7	Crape Myrtle (<i>Lagerstroemia indica</i>)	5.5"	17.3"	8'	25'	70%	70%	70% Good	Mature	N	Neighbor's tree, 7' to property line curb beside gas station.	Keep	N's, but <48"
8	Crape Myrtle (<i>Lagerstroemia indica</i>)	4.5"	14.1"	6'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, 6' to property line curb beside gas station. DI (drainage inlet) at 4' from tree (between tree and curb).	Keep	N's, but <48"
9	Crape Myrtle (<i>Lagerstroemia indica</i>)	~5"	15.5"	7'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~4' to property line fence beside gas station.	Keep	N's, but <48"
10	Crape Myrtle (<i>Lagerstroemia indica</i>)	~5"	15.5"	7'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~4' to property line fence beside gas station.	Keep	N's, but <48"
11	Crape Myrtle (<i>Lagerstroemia indica</i>)	~5"	15.5"	7'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~4' to property line fence beside gas station.	Keep	N's, but <48"
12	Brisbane Box (<i>Lophostemon confertus</i>)	~6"	19"	10'	42'	65%	55%	60% Fair	Mature	N	Neighbor's tree, ~6' to property line fence beside gas station. Very lanky foliage crown structure.	Keep	N's, but <48"
13	Brisbane Box (<i>Lophostemon confertus</i>)	~6"	19"	10'	40'	65%	55%	60% Fair	Mature	N	Neighbor's tree, ~6' to property line fence beside gas station. Very lanky foliage crown structure.	Keep	N's, but <48"



14	Brisbane Box (Lophostemon confertus)	~6"	19"	10'	40'	65%	55%	60% Fair	Mature	N	Neighbor's tree, ~6' to property line fence beside gas station. Very lanky foliage crown structure.	Keep	N's, but <48"
15	Pine, Canary Island (Pinus canariensis)	~7"	22"	6'	42'	60%	55%	57% Fair	Mature	N	Neighbor's tree, ~4' to property line fence beside gas station. Lanky foliage crown.	Keep	N's, but <48"
16	Brisbane Box (Lophostemon confertus)	~6"	19"	4'	38'	60%	50%	55% Fair	Mature	N	Neighbor's tree, ~6' to property line fence beside gas station. Very lanky foliage crown structure.	Keep	N's, but <48"
17	Crape Myrtle (Lagerstroemia indica)	~6"	19"	5'	25'	55%	55%	55% Fair	Semi-mature	N	Neighbor's tree, ~2' to property fence corner behind gas station.	Keep	N's, but <48"
18	Pine, Canary Island (Pinus canariensis)	~7"	22"	6'	40'	60%	55%	57% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station. Lanky foliage crown.	Keep	N's, but <48"
19	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
20	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	27'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
21	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	26'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
22	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
23	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
24	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
25	Pine, Canary Island (Pinus canariensis)	~7"	22"	10'	43'	60%	55%	57% Fair	Mature	N	Neighbor's tree, ~4' to property line fence behind gas station. Lanky foliage crown.	Keep	N's, but <48"
26	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	25'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
27	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	26'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
28	Crape Myrtle (Lagerstroemia indica)	~5"	15.5"	6'	27'	65%	70%	67% Fair	Mature	N	Neighbor's tree, ~3' to property line fence behind gas station.	Keep	N's, but <48"
						Good =		4			"Keep" =		25
						Fair =		21			In Footprint =		3
						Poor =		3					25
						Very Poor =		0			"Street Trees" =		2
						Dead =		0			"Neighbor's Trees" =		23
								28			Yes, "Protected", >48" =		0
											No, Not "Protected" <48" =		3



3.3 Legend - Tree Inventory Headers

<p>Observations were made and data gathered during my on-site inspections 04/09/2019. Further conclusions and protection measures were refined from office research, seminar information, and past experience based on those observations and data.</p>	
<p>Unless otherwise defined as a limited inventory, all site trees larger than a minimum diameter (usually ≥ 4-inch) were numbered and inspected. The gathered data was entered into a Microsoft[®] Excel database. The data is encapsulated into the accompanying "Tree Inventory Data" section. The categories are typically self-descriptive with only the following notes.</p>	
Tree Number:	I sequentially assigned tree numbers from 1 to 28. A 1" by 3" aluminum tag can be stapled to (or near) each tree at about eye level. I add a prefix "19" to identify each as linked with this inventory, thus differentiating it from any other numbering system.
Names:	We employ the initial common names from McMinn, if listed, otherwise from Sunset. Scientific/botanical names are included to minimize confusion. As applicable, we used McMinn's key and/or Sunset's descriptions.
DSH:	<p>Diameter at Standard Height: This measurement is the trunk diameter measured at the standard height defined by the jurisdiction in which the tree trunk grows. The industry standard is 54 inches above ground level, taken with a standard surveyor's diameter tape, recorded in inches. Multi-trunked tree's diameters are measured below the lowest branch swelling and/or individual stems at 54 inches, or an average, depending on which height measurement is deemed to produce the best representative figure.</p>
Crown Radius (CR):	The averaged radii's measurement is shown in feet ... $(N+S+E+W) / 4 = CR$.
Ht (Height):	Estimated distance foliage crown extends above grade, recorded in feet.
Vigor:	Rating for tree's growth and vitality as a blend of elements like leaf or bud size and color, twig growth (elongation), accumulation of deadwood, cavities, woundwood development, trunk expansion (growth "cracks"), etc.
Form:	Structure rating for tree's architecture as a composite of factors like branch attachment, lean and balance, effects of prior breakage, crossing-tangled-twisted limbs, codominant trunks and/or branches, decay and cavities, anchorage (roots), etc.
Overall Condition:	<p>Percentage rating assessing the tree's overall vigor, recent growth, insects/diseases, and structural defects. Relative text rating included in the same cell as: Excellent, Good, Fair, Poor, Very Poor.</p> <p>This corresponds to the "Condition Percentage" factor in tree valuations per the Council of Tree and Landscape Appraisers (CTLA) system used by the International Society of Arboriculture. (CTLA, 1992.)</p> <p>This combines foliage, branches, limbs, trunk, and root ratings into a composite condition score. This rating is used calculating these trees' appraised values required by some jurisdictions like Palo Alto.</p>



Aptitude to Preserve:	<p>Considers the species' tolerance to construction impacts and the tree's condition (vigor & structure), longevity/age, adaptability, and aesthetics.</p> <p>This rating takes into account most announced intentions of changes in area/lot use.</p> <p>Degrees: High, Moderate, Low, Very Low, In footprint, N (N=Neighbors' tree).</p>
	<ul style="list-style-type: none"> • High: Tree in great condition and any existing defects or stresses are minor or can be easily mitigated.
	<ul style="list-style-type: none"> • Moderate: Notable vigor and/or stability problems but which can be moderated with treatment &/or increased tree protection zone.
	<ul style="list-style-type: none"> • Low: Significant problems, including shorter life expectancy. Difficult to retain but potential with much larger tree protection zone.
	<ul style="list-style-type: none"> • Very Low: Substantial existing problems, defects, stresses. Unlikely to survive impact of any project.
	<ul style="list-style-type: none"> • In footprint: So close to the proposed construction impacts that it is rated as being within the new footprint.
Age / Longevity:	Rates tree's relative age: Young (Long) / Semi-Mature / Mature / Over-Mature (Short).
Comments:	Notes most obvious defects, insects, diseases or unique characteristics.
Protected Tree?	Per Los Altos Municipal Code Chapter 11.08, "Protected Trees" include any in the public right of way and any with a circumference of 48-inches or larger (~15" diam.) and others required to be retained or planted on project earlier or specific-designated.

4.0 Tree Preservation Guidelines: Pre-Construction Maintenance notes

4.1 Identify a TPZ (Tree Protection Zone) for each tree to remain after the project closes. A TPZ is defined by the jurisdiction in which the project is located to provide above-ground- and root-zone-protection for trees.

In the absence of a specific local definition, the TPZ shall be a circle with a radius of 10-feet for every 1-foot of trunk diameter.

The TPZ is a no man's land within which no activity may occur without Project Arborist or City Arborist monitoring and/or sign-off.

For this project, all trees to remain are smaller than 1', so this project's impacts are outside of that "Zone".

4.2 Supplemental watering is typically called for by a rule of thumb for construction site stressed trees as 10-20 gallons per trunk diameter inch per month, particularly critical during hot weather.

This is modified by the Project Arborist on site with root zone inspections and monitoring as water demands will obviously be lower during cool, damp weather. Inspection should find soil between 3" and 18" below grade moist enough for roots to thrive.

For the instant project, none of the trees to remain will have significant root zone soil on the project side of the fence. Perhaps the neighbor's landscape maintenance personnel can be notified of this so they can modify their irrigation to accommodate future weather anomalies (drought).



- 4.3 Other than possibly pruning for work access clearance, no pruning is absolutely needed at this time, though pruning to reduce deadwood out and fungus-infected branches (branchlets) might be prudent.
Nevertheless, pruning to reduce foliage branch endweights could usually make for better-structured trees, if the neighbor wants to have their qualified tree care contractor monitoring that situation.
- 4.4 Approaching project commencement, when the foundations, driveways, and other hardscape features (including trenches) have been staked/located, then some pruning may likely be needed. Raising/clearance can be minimized for space to work. Root pruning along the lines within 15-feet on either side of mature trees' trunks can sever roots cleanly, reducing shock to these trees' systems.
Root pruning prior to excavating for the basement parking can be done to avoid excessive root damage (rips, tears, shatter, breakage). This would be unreasonably unnecessary for this project if the contractor's excavator operator is skillful/observant enough to avoid tearing through roots larger than 2" diameter.
- 4.5 All project tree work performed before, during, or after construction is to be done by WCISA Certified Tree Workers under the supervision of an ISA Certified Arborist (or equivalents, if they possess sufficient skill for approval by Project Arborist). This includes all pruning, removals (including stump removals) within driplines of trees to be preserved, root pruning, and repair or remedial measures.

5.0 Tree Preservation Guidelines: Tree Protection Measures

- 5.1 Fencing and other root zone protection is usually specified/required, but as noted above, would not be useful for this specific case, as currently planned/drawn.
- 5.2 Restrictions / Cautions / Requirements

This section is highly unlikely to be needed, but is included as a preliminary insurance/safeguard calling out some of the most common supercritical TPMs.

- 5.2.1 No parking or vehicle traffic over any root zones, unless using buffers approved by Project Arborist or City Arborist.
- 5.2.2 Monitor root zone moisture and maintain as per above.
- 5.2.3 Have an ISA Certified Arborist repair any damage promptly.
- 5.2.4 No pouring or storage of fuel, oil, chemicals, or hazardous materials under any trees' foliage canopies or future plant materials' root zone areas.
- 5.2.5 No grade changes (cuts, fills, etc.) under foliage crowns of trees to be preserved without prior Project Arborist approval. For instance, hand excavation and thinner base prep may be required in some root zone areas.
- 5.2.6 Any additional pruning required must be performed under arborist supervision – including root pruning – clean, smooth cuts with no breaking, scraping, shattering, or tearing of wood tissue and/or bark.
- 5.2.7 No storage of construction materials under any foliage canopy without prior Project Arborist or City Arborist approval.



- 5.2.8 No trenching within the critical root zone area. Consult Project Arborist before any trenching or root cutting beneath any preserved tree's foliage canopy. It is best to route all trenching out from under trees' driplines. Often trenches in root zones must be hand excavated to leave roots intact.
- 5.2.9 No clean out of trucks, tools, or other equipment over any essential root zone. Keep this debris outside of any existing or future root zone.
- 5.2.10 No attachment of signs or other construction apparatus to preserved trees.

6.0 Certification & Use Statement

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

The instant report is applicable to this project at 4350 El Camino Real and may not be adopted elsewhere without site-specific updates/revisions/adaptations by this Project Arborist. This report is valid and released by the Arborist for use upon his receipt of payment in full for his services.

Thank you for the opportunity to apply my knowledge and expertise working with your trees. Good luck with the construction project and tree care decisions ahead of you. If I can answer any further questions for you, the City staff, tree care contractors, or anyone with concerns about your trees, please call or e-mail to inform me.

Respectfully submitted,

Raymond J. Morneau
ISA Certified Arborist #WE-0132A
ISA Tree Risk Assessment Qualified