

Appendix ARB

Arborist Report

Certified Arborist's Tree Inventory & Pre-Construction Report –

Data: February 13, 2021
Report: February 26, 2021

Prepared for:
Zachary Trailer

APN
158-45-001

Site:
Zach
720 Central Avenue
Mountain View, CA 94043

Prepared by:
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Planning
Division



**Received on
Jul 20, 2021**

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1.0 Assignment & Introduction

I have been retained by Zach Trailer to provide the pre-construction tree inventory and Arborist's Report for a commercial project on the property including 724-730 Central Avenue in Mountain View.

I have received these documents on which to base my work:

- ✓ Sheet SU1 "Topographic Survey", dated 4-7-20
- ✓ Sheet A0.3 "Architectural Site Plan", dated 01-06-2021
- ✓ Memorandum from City Arborist, Jakob Trconic, to MV Planner, Lata Vasudevan, dated January 28, 2021

For my tree locations map here below, I include my marked up copy of the topo SU1.

As needed, as plans continue to develop, I can incorporate plan updates here as an addendum to my report – or, if there are major changes, I can revise my report to reflect the plan.

2.0 Discussion with leading summary

2.1 Summary

Summary:

Seven (7) trees are associated with this property, either as site trees (2), those just off-site as overhanging neighbors' trees (4), or municipal street trees (1).

The two onsite privets are really mere shrubs which may have had tree-potential but were repeatedly severely pruned to be multi-stemmed shrubs with no prospects of ever becoming useful trees. These are not "Heritage Trees" and must be removed.

The maple street tree just beyond the property line can remain unscathed, if The City does not require utility work in its root zone.

The neighboring property's four Canary Island pines have been subjects of substandard pruning practices over the most recent 20 years ... also some foliage branch breakage due to over-thinning and no proper management of endweights as they have accumulated. But, as they are at least 17-feet from the new building, per sheet A0.3, they can be expected to endure with no noticeable change – if the root zones between these pines and the new foundation can remain largely unimpacted.

The 7 trees are charted below as to "Heritage Tree" status and other protected categories. Other summary tables and charts are included as well. This report follows the "Landscape Guidelines" published by the City of Mountain View.



Tree Frequency Charts / Tables

Overall Condition Chart

Percentage Range	Text Description	Quantity
0%	DEAD	0
1% to 25%	Very Poor	2
26% to 49%	Poor	3
50 % to 70%	Fair	2
71% to 90%	Good	0
91% to 100%	Excellent	0
		7

Overall Tree Frequency Chart (7)

	Protected = 5					Not Protected = 2
	Heritage-size = 4			Non-Heritage-size = 3		
	Street	Neighbor	On-property	Street	Neighbor	
Total	1	4	0	0	0	2
Keep	1	4	0	0	0	0
Remove	0	0	0	0	0	2

Tree Inventory Summary: 730 Central Avenue, Mountain View, CA

										Data date: February 13, 2021
#	Name	DBH	PT?	Condition	Aptitude	Age	K	R	Comments	
1	Maple, Norway	7.9"	Yes	55% Fair	Mod.	Mature	X		Municipal street tree; 15' to existing parking.	
2	Pine, Canary Island	26.0"	Yes	50% Fair	Poor	Mature	X		Neighbor's over-thinned pine; 1' to building.	
3	Pine, Canary Island	23.0"	Yes	45% Poor	Poor	Mature	X		Neighbor's over-thinned pine; 3' to building.	
4	Pine, Canary Island	23.4"	Yes	45% Poor	Poor	Mature	X		Neighbor's over-thinned pine; 3' to building.	
5	Pine, Canary Island	20.3"	Yes	40% Poor	Poor	Mature	X		Neighbor's over-thinned pine; 5' to fence.	
6	Privet, Glossy	8.0"	No	16% V. Pr	Mod.	Over-mat.	X		Shrub-form in back fenceline.	
7	Privet, Glossy	11.0"	No	15% V. Pr	Mod.	Over-mat.	X		Shrub-form in back fenceline.	
7	Protected Tree? = Yes = 5			0 = Good		Keep = 5	2		= Remove	
	Protected Tree? = No = 2			2 = Fair						
			7	3 = Poor						
	"Protected Tree" = diam. 12-inches or ++ or street tree or neighbor's.			2 = Very Poor						
				0 = Dead						
				7						

2.2 Responding to Arborist Trconic's four-point memo

Item 1: Yes. See our discussion, inventory, and notes below.

Item 2: The Project Landscape Architect and Designer/Engineer can spec the structural soil and Municipal Street Tree(s), noting that the City's website still lists Freeman maple (*Acer x freemanii*) or black maple (*Acer nigrum*) for this location:

<https://www.mountainview.gov/civicax/filebank/blobdownload.aspx?blobid=10803>

Item 3: Landscape plans are usually drawn by the Project Landscape Architect. At this point in time, no Heritage Trees are planned to be removed.

Item 4: The canopy study is also in the expertise of the Project Landscape Architect.



2.3 Discussion

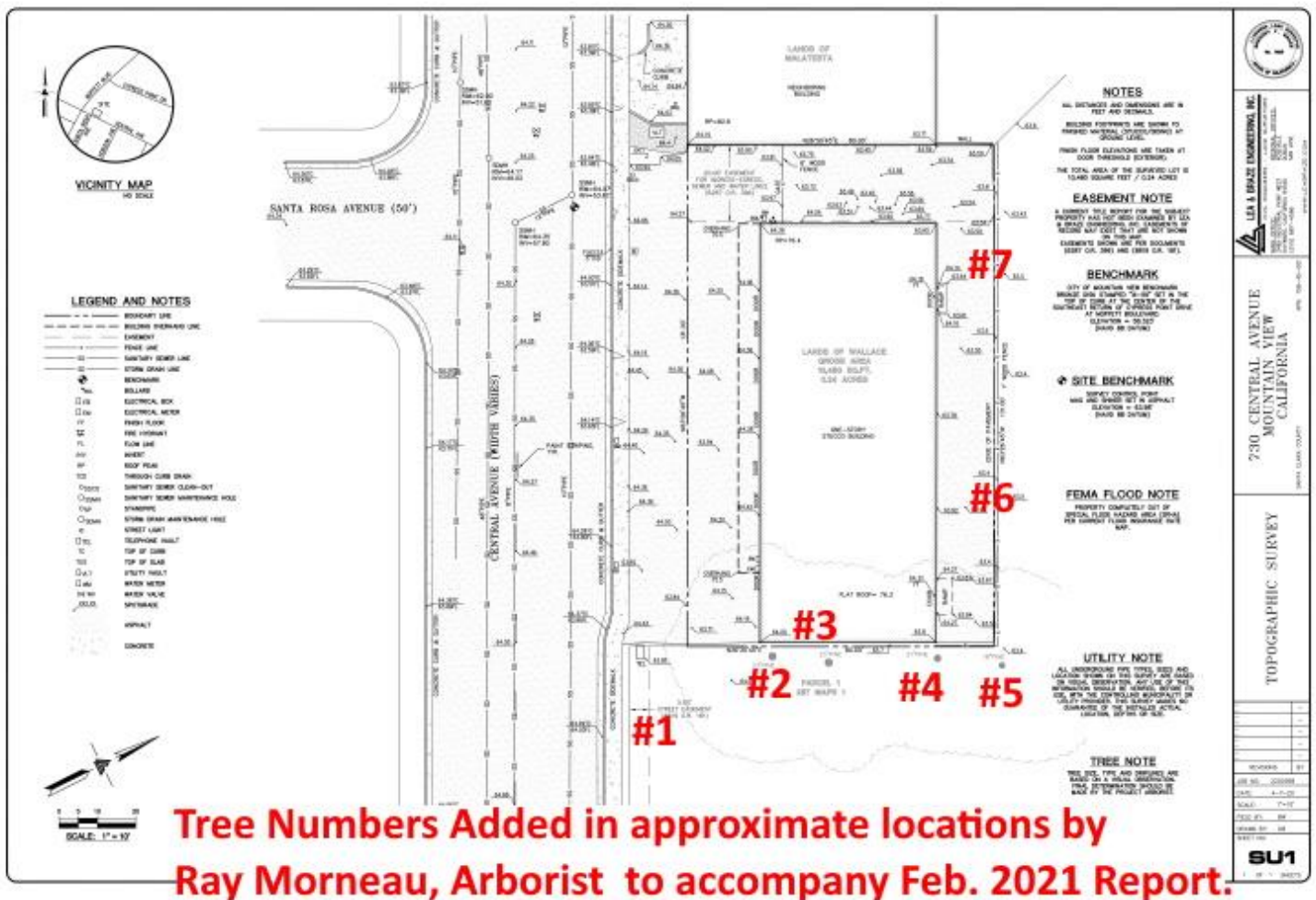
As project plans are always a work-in-progress, we address tree protection/preservation as specific as up to this point in time. It is good to keep the project arborist involved, so thoughtful decisions can be made about tree preservation requisites as on one hand trees are assets. But, on another, some often need to be removed, like the privets here, because of issues like structure, location, and/or longevity problems – or per conflicts with project or City objectives.

I have had good success on similar projects on Bay Area sites working with Zach Trailer’s project team – I look forward to success working on this one, too.

I envision helping make logical decisions about this site’s trees as the project progresses.

3.0 Tree Locations Maps, Tree Data, & Data Legend

3.1 Tree Locations Map using the “Topographic Survey” (SU1) ...





3.2 Tree Data:

TREE INVENTORY: 724-730 Central, Mountain View, California.											Data date: February 13, 2021		
T #	Genus species / Name, Common	DBH = Standard Diameter at Breast Height (inches)	Circumference (Trunk: inches)	Av. Crown Radius (ft)	Height (ft)	% Condition: Vigor, Health, Vitality	% Condition: Form, Structure	% Overall Condition	Species' Aptitude (ability to overcome disruptions)	Age / Longevity	Keep?	Remove?	Comments
1	<i>Acer platanoides</i> / Maple, Norway	7.9"	24.8"	8'	16'	60%	55%	55% Fair	Mod.	Mature	X		Typical local Municipal Street Tree, 8.5' BOC (Back of Curb), 13' to neighbors' pkg lot; 15' to existing asphalt parking lot here; 35' to front corner of 724 building.. Pac Bell vault at 10'; Extensive surface roots in bare soil at base of this tree.
2	<i>Pinus canariensis</i> / Pine, Canary Island	26.0"	81.7"	18'	52'	58%	50%	50% Fair	Poor	Mature	X		Corner of bldg wall 724 @ 1'; pkg lot curb at 6'; prior lowest branch breakage, so pruned up with now lowest branch at ~25'; over-thinned foliage crown.
3	<i>Pinus canariensis</i> / Pine, Canary Island	23.0"	72.3"	16'	60"	50%	45%	45% Poor	Poor	Mature	X		Bldg wall 724 @ 3'; pkg lot curb at 8"; pruned up & over-thinned foliage crown; moderate foliage branch endweights.
4	<i>Pinus canariensis</i> / Pine, Canary Island	23.4"	75.5"	14'	65"	50%	45%	45% Poor	Poor	Mature	X		Bldg wall 724 @ 3'; pkg lot curb at 8"; pruned up & over-thinned foliage crown; moderate foliage branch endweights.
5	<i>Pinus canariensis</i> / Pine, Canary Island	20.3"	63.8"	17'	50"	55%	25%	40% Poor	Poor	Mature	X		Corner of wooden fence behind 724 @ 5'; pkg lot curb at 2"; pruned up & over-thinned foliage crown; moderate foliage branch endweights ... & embedded bark co-dominant crotch (weak attachment) at ~25'.
6	<i>Ligustrum lucidum</i> / Privet, Glossy	~7.0" @ soil	25.1"	7'	16"	33%	5%	16% V. Pr.	Mod.	Over-mature		X	Straddles fence at back of existing 730 bldg; had been multi-stemmed, now one 4" trunk remains alive after severe pruning; ~8' to back of bldg.
7	<i>Ligustrum lucidum</i> / Privet, Glossy	~11.0" @ soil	44"	14'	18"	30%	5%	15% V. Pr.	Mod.	Over-mature		X	Straddles fence at back of existing 730 bldg; multi-stemmed, now ~ten 3"-5" stems remain alive after severe pruning; ~10' to back of bldg., 3' to neighbors' parking lot behind.



3.3 Legend: for Ray Morneau, Arborist: Some Headers – Definitions – Notes:

<p>Observations were made and data gathered during my on-site inspection (on February 13, 2021). Further conclusions and protection measures were refined from office research, seminar information, and past experience based on those observations and data.</p>	
<p>All significant trees were numbered and inspected.</p>	
<p>To give a fair/complete overview of site trees, we include material larger than 4-inches on this site.</p>	
<p>The gathered data was entered into a MicroSoft® Excel worksheet. The data is condensed into the accompanying "Tree Inventory Data" section with discussion through this report. The categories are typically self-descriptive but with the following notes.</p>	
Tree Number:	<p>I sequentially assigned tree numbers from 1 to 7. A 1-x3-inch aluminum tag is stapled to each tree at about eye level. I add a prefix "21" to identify each as linked with this inventory, thus differentiating it from any other numbering system.</p>
Names:	<p>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.</p>
DBH	<p>Diameter at Breast Height: Diameter tape measurement at the standard height (4.5-feet) or below the lowest branch swelling and/or individual stems, or an average, to provide the best representative figure.</p>
Circumf. (inches)	<p>Many jurisdictions prefer seeing circumference instead of tree's diameter, since many government codes are written/used by persons lacking a forestry background. So, we multiply the diameter by 3.141592 to arithmetically show the trunk circumference.</p>
% 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>It combines foliage, branches, limbs, trunk, and root ratings into a composite condition score. This rating is used in the calculation of these trees' appraised value required by cities like Sunnyvale, Los Gatos, Palo Alto.</p>
Species' Aptitude	<p>Good / Moderate / Poor: relative rating of the particular species' tolerance of construction impacts - pressures and changes like injury, water changes, fill soil, root loss, site disturbance. (Many on chart in Matheny & Clark.)</p>
Age / Longevity	<p>Rates tree's relative age: Young (Long) / Semi-Mature / Mature / Over-Mature (Short).</p>
Comments:	<p>Notes; most obvious defects, insects, diseases or unique characteristics.</p>
Heritage Tree:	<p>Tree's status as a protected tree in the City of Mountain View as pertaining to Planning / Building [municipal street tree (ST), neighbor's overhanging tree (OH), or "Heritage Tree" (HT) ...</p>
	<p>... by Mountain View Municipal Code, a heritage-size tree is any tree 48-inch circumference (15.3-inch diameter) at 54-inches above grade or an oak, redwood, or cedar 12-inch circumference (3.8-inch diameter)].</p>



**Project-specific Note: 730 Central Av, MV
February 26, 2021**

- A. The tree protection discussion and guidelines in this report are limited as we have no existing on-site trees to be preserved.

- B. The two reasons to keep it in the report at this time are:
 - 1. as they pertain to minimizing damages to neighbor's trees (e.g.: avoid injuring roots and/or foliage canopies beyond the property line), and
 - 2. in case plans change (design and/or work methods) and enhanced tree protection is needed for adjacent trees (neighbors' pines and/or municipal maple street tree).

- C. Meanwhile, it should be sufficient to:
 - C-1: install tree protective fencing (TPF) at the property line – probably just relying on the typical contractor's chain link site fence.
 - C-2: install root zone protection – like a 6-inch thick layer of arborist chipper chips, supplemented by plywood sheets or steel trench plates (depending on type of traffic).
 - C-3: provide supplemental water to root zones and notify tree owners that it is advisable for them to provide ongoing supplemental water for their trees. Also, notify them that their trees would shed fewer branches if properly pruned.

4.0 Tree Preservation Guidelines: Pre-Construction Maintenance notes

- 4.1 Supplemental watering should be provided. A rule of thumb for construction site stressed trees is 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.
- 4.2 No pruning is absolutely needed at this time, unless project design cannot avoid clearance issues. Nevertheless, deadwood removal and endweight reduction is commonly performed to improve existing site trees. And, usually project trees benefit from "Crown Cleaning" for deadwood removal and "Crown Thinning" to lighten branch endweights) at sometime before the close of the project. Then the owner has a benchmark against which to compare future status of the trees. All work must conform to published ANSI A-300 Standards



- 4.3 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. Making grade for roadways, driveways, drive aisles, parking, utility trenches, piers, footings, building foundations – digging in a root zone by whatever name – can start out with a spotter and power equipment until 1-inch-diameter (about thumb-size) roots are encountered. At that point (1" diameter), the spotter must stop the equipment operator and proceed with hand tools (shovels, pick, mattock, etc.) to carefully expose roots 1- to 2-inch diameter and larger to be severed by hand (handsaw, Sawz-All®, or equivalent). Roots larger than 4-inch diameter must remain intact pending Project Arborist observation and consent. Roots to be severed shall be cut cleanly – no shatters, rips, tears, crushed or bruised root material. Misting, moist burlap curtains/covers, plywood overlay may be required to keep roots from drying out if backfill is delayed more than three hours after digging.
- 4.4 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
Must be in place before demolition or any other project site work.
Though generally expected to extend to the dripline, here the TPF can be installed as close to that as possible.
One 24- to 36-inch opening or gate should be left for inspection access to each area.
Fence material is to be 6-foot-high chain link fence supported by 8-foot long, 2-inch diameter galvanized fence posts driven 2-feet into the soil.
Where no plant material root zone buffer is growing (e.g. ivy, shrubs, turf), a wood chip mulch is to be spread evenly to a 4-inch depth from the dripline to 6-inches from the base of the trunk. Taper to existing ground level at the base of the trunk with a slope of about 2:1.
Additional root zone areas requiring protection can be buffered as Project Arborist requires, e.g., if project scope changes. Commonly acceptable buffer materials often include wood chips, crushed rock, plywood, steel trench plates, and/or a combination of such materials. Consult Project Arborist for depth specifications (which vary depending on use of area and/or specific traffic).
Root zone areas to be protected may be modified by the Municipal Arborist or Project Arborist as plans develop.

5.2 Prohibited Acts & Admonishments/Requirements

- 5.2.1 No parking or vehicle traffic over any root zones, unless using buffers approved by Project Arborist.



- 5.2.2 Monitor root zone moisture and maintain as per above.
- 5.2.3 Have a certified arborist repair any damage promptly.
- 5.2.4 No pouring or storage of fuel, oil, chemicals, or hazardous materials under these foliage canopies.
- 5.2.5 No grade changes (cuts, fills, etc.) under these foliage crowns without prior Project Arborist approval. For instance, hand excavation and thinner base prep may be required in the redwood 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 approval.
- 5.2.8 No trenching within the critical root zone area. Consult Project Arborist before any trenching or root cutting beneath any 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 the critical 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 these trees.

5.3 Construction-time Maintenance

- 5.3.1 Monitor root zone moisture and maintain as per above (§4.1).
- 5.3.2 Maintain/repair tree protection fences and/or root zone mulch/buffer material.
- 5.3.3 Have a certified arborist promptly repair any damage to trees.

6.0 Certification & Use Statement

The instant report is applicable to this project at 730 Central Avenue and may not be adopted without site-specific updates/revisions/adaptations by this Project Arborist.

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.

This report is valid for submittal and use upon my receipt of valid payment.

Respectfully submitted,



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