

**Assessment of Twenty (20) Regulated Trees
at and adjacent to**

**1220 Oakmead Parkway
Sunnyvale, California**

Prepared for:

BPR Hotels
953 Industrial Ave #100
Palo Alto, CA 94303
Attn: Mr. Perry Patel

Field Visit:

Walter Levison, Consulting Arborist (WLCA)
10/12/2021

Report by WLCA

10/20/2021

Revised 2/7/2022 & 5/6/2022

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1.0 Summary

1a. PROTECTION STATUS:

PROTECTED-SIZE: **Trees #51, 52, 53, 54, 55, 56, 57, 58, 69, 70** are considered protected-size specimens that will require a City tree removal permit prior to demolition of or removal of one or more of the trees.

NON-PROTECTED SIZE: **Trees #59, 60, 61, 62, 63, 64, 65, 66, 67, 68** are considered non-protected size trees that can be removed without a City tree removal permit.

NEIGHBOR TREES: Trees on neighbor properties are noted with a **box**, to denote those specimens that cannot be removed without authorization from the neighbor tree owner, which may be a private entity, or may be the City of Sunnyvale, even if the tree is considered to be of "non-protected size".

1b. TREE DISPOSITION:

1b(i). REMOVALS:

Six (6) off-site and on-site **trees #51, 56, 57, 60, 66, and #68** are to be removed per plan, due to conflicts with proposed new site plan-related construction, including landscape renovation construction and planting.

Of these six (6) trees expected to be removed, there are **three (3) protected-size trees requiring a removal permit from the City of Sunnyvale, including:**

- **City right-of-way tree #51 and**
- **On-site trees #56 and #57.**

1b(ii). PROTECT-IN-PLACE (PIP):

Fourteen (14) remaining on-site and off-site trees will be protected in place (PIP) using orange plastic snow fencing as a lower trunk buffer wrap, and/or erection of chain link fencing as a protective barrier for lateral root system areas, "where possible" (TBD). These fourteen (14) trees include the following:

- **Trees #52, 53, 54, 55, 58, 59, 61, 62, 63, 64, 65, 67, 69, and #70.**

2.0 Assignment & Background

Walter Levison, Consulting Arborist (WLCA) was directed to tag and assess all trees of all trunk diameter size classes, located on and directly adjacent to the project location, which encompasses the entire lot known as 1220 Oakmead. As noted above in section 1.0, there are ten (10) tree specimens on neighbor properties, and ten (10) specimens on the subject property.

All trees were tagged with aluminum numbered racetrack shaped tags "51" through "70": a total of twenty (20) trees included in this initial tree study. Trunk diameters were measured using a forester's D-tape, which converts actual circumference into an "averaged" diameter in inches and tenths of inches.

Trees were measured by WLCA at 4.5 feet above grade: standard height used for most USA tree surveys.

Tree heights were measured using a digital Nikon forestry 550 pro hypsometer. Tree canopy diameters were estimated visually.

The tree tag numbers typed on the WLCA tree map markups included in this arborist report are indicated directly over the approximate location of each tree, but are not considered totally accurate. The topographic survey shows the most accurate trunk plot dot locations, while the proposed site plan 1st floor sheet markup is considered the least accurate of the two maps prepared by WLCA.

As required for all City of Sunnyvale arborist report submittals, WLCA included tree data, an appraised dollar value, and at least one digital photograph of each of the 20 trees included in this tree study.

The WLCA tree location and protection map markup (MAP #1 OF 2) was revised using a completely revised civil demolition sheet C7 version 5/5/2022 provided by the project engineer on 5/6/2022. A second map (2 of 2) was created using the topographic survey sheet.

Digital images of the trees were archived by WLCA during the 10/12/2021 field assessment.

3.0 City of Sunnyvale, California – What Trees are Protected?

Per the City's official website, the following trees are protected on private lots:

"Some private trees are protected and require a permit to be removed. To determine if a tree is protected, measure its circumference from 4 1/2 feet above ground:

- If a single-trunk tree measures 38 inches or greater, it is protected
- If a multi-trunk tree has at least one trunk that measures 38 inches or greater, or the measurements of the multi-trunks added together equal at least 113 inches, it is protected."

The above-noted circumferences were converted to diameter by WLCA. The following are the standardized protection thresholds in diameter, which is the standard U.S. method of measurement for determining protection size:

- Single trunk trees measuring greater than or equal to **12.1 inches diameter** at 4.5 feet above grade.
- Multi-trunk trees with trunk diameters totaling greater than or equal to **36 inches diameter** at 4.5 feet above grade

Per the above information in report section 1.0, **trees #51, 56, and #57** are considered protected-size specimens that will require a City tree removal permit prior to demolition of the trees. Tree #51 appears to be on the City right of way.

Various protected-size trees located on-site and off-site on adjoining neighbor properties are proposed to be protected-in-place (PIP) as of the May 6, 2022 revision of this arborist report.

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 City of Sunnyvale planning division Staff (to be determined).

2. 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 on-site 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.



Trees to be wrapped with type III trunk buffer wrap at this site:

Trees to be retained and protected in place (PIP)*. Current list of tree tag numbers expected for PIP:

Fourteen (14) Trees #52, 53, 54, 55, 58, 59, 61, 62, 63, 64, 65, 67, 69, 70.

*** If neighbor trees are protected by existing property boundary line steel chain link fencing that is to remain as-is during the site plan construction build-out period, then no trunk buffer wraps will be necessary for those neighbor trees.**

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

Fencing1 / Panel Type:

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 Fencing1 / Tube Posts and Rolled Chain Link:

Using a professional grade post bender, 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-foot 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.



Alternative Fencing2: Existing Fences to Remain As-Is:

If existing chain link property boundary line fencing is to remain as-is during the construction project build-out period, then portions of this fencing can act as the de-facto "Root Protection Zone" (RPZ) fence.

Pre-construction fence routes:

As far as possible from the trunk edges of trees being retained and protected in place (PIP). The WLCA tree location and protection map markup 1 of 2 below in this report shows "approximate" fence erection locations in heavy red dashed line box formations that are suggested minimum RPZ dimensions. Note that the dimensions shown on the WLCA map are "conceptual", and subject to adjustment by the construction team prior to start of site work, given that there are various constraints that may limit our ability to erect and maintain fencing at the suggested red dashed line locations, such as proposed new retaining wall foundation footings, proposed utility pipe and conduit trench alignments, etc.

The following list of tree specimens that are currently proposed for PIP:

Fourteen (14) Trees #52, 53, 54, 55, 58, 59, 61, 62, 63, 64, 65, 67, 69, 70.

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.

4. Tree Removal Permit:

Do not remove protected-tree status tree specimens prior to obtaining a valid City of Sunnyvale tree removal permit.

The following protected-size trees are currently expected to be removed prior to the proposed site plan project:

Trees #51, 56, and #57.

Tree #51 appears to be a City right-of-way tree specimen.

5. Signage: The root protection zone (RPZ) fencing shall have one sign affixed with UV-stabilized zip ties to the chain link at eye level for every 20 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):

**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
CITY OF SUNNYVALE CODE**

**PROJECT ARBORIST:
TELEFONO CELL:**

EMAIL:

6. Irrigation Temporary with Straw Wattles (During Work Period):

Temporary supplemental irrigation water applications typically are performed to boost vigor and partially mitigate for the loss of roots during new construction. Also, irrigation water pipes are typically destroyed or at least shut off during construction, such that existing systems cannot be used during site work to provide any water to trees.

Temporary supplemental irrigation water can be applied via any method available, such as soaker hoses, garden hoses, water tank spray apparatus, etc.

- **Trees #52, 53, 54, 55, 58, 69:**

Pin down straw wattles to force irrigation water to percolate vertically downward into the root system. See photos at right.

Apply 50 to 75 gallons of water per week where possible, applied on a single day of the week.

- **Magnolia #70:** Existing irrigation system(s) should be kept active and running year-round. The tree may not require supplemental irrigation via water tank truck, unless the existing turf lawn sprinkler system is for some reason inactive and not running during the site work period (construction team will need to verify this with the neighbor commercial property manager/owner).

If the system is not running, supplemental irrigation applications should be roughly **75 to 100 gallons per week**, applied on a single day.

- **Neighbor trees along south boundary:**

Pin down straw wattles to force irrigation water to percolate vertically downward into the root systems. See photos at right.

Apply 50 to 75 gallons of water per week where possible, applied on a single day of the week.

Note that although these trees are in many cases owned by the neighboring lot owner to the south, the existing chain link property boundary line fence is incorrectly erected too far southward from the actual boundary line, which makes it appear that all of the south boundary trees are owned by 1220 Oakmead.

Also, this random act of fate (the incorrect location of the property line fence) has allowed for the trees to be easily accessible by the 1220 Oakmead build team, which means that straw wattles can easily be pinned down around the tree planting strip perimeters, and irrigation water easily applied each week, without dealing with cross-boundary access issues.



7. Root Pruning:

If roots greater than 1.0 inch diameter each are required to be pruned within 15 linear feet of any tree being retained on-site or off-site, contact the project arborist to consult.

Tools:

All root pruning cuts will need to be performed using a sawzall (reticulating saw) affixed with a green wood pruning blade specified for such purpose.

Cut Angle:

All root pruning cuts will need to be performed at a right angle (90 degrees) to the root growth direction, and the cut ends smeared with west mud to protect against desiccation.

Backfill and Irrigation:

Backfill ASAP, preferably within 24 hours. If the root pruning area cannot be backfilled within 24 hours, cover the roots with 3 layers of wet burlap sack material to protect against sunburn and desiccation.

Images at right:

- 1. Top: Three to four layers of burlap sun protection over roots exposed in a shored trench. Some arborists specify daily water spray of the burlap material to attempt to prevent root desiccation.**



- 2. Lower left: Correct reticulating saw blade for root pruning use says "wood" or "pruning" or similar on the package or on blade itself.**
- 3. Lower right: Correct angle of cut is 90 degrees to the root growth direction. i.e. Directly across the root.**



8. Pruning & Long Term Maintenance of On-Site Southern Magnolias:

Magnolias #52, 53, 54, 55, and #58 were originally to be removed per the 2021 site plan. The author had recommended that these trees be removed in 2021 when the original arborist report was prepared.

Past Pruning: The magnolias were severely top pruned in 2020 and/or 2021 by an unknown tree care company and for unknown reasons, as shown in the author's fall, 2021 digital images in section 8.0 of this report. The result of this top pruning was to remove most of the trees' above-ground live biomass, which has severely compromised the structural and health attributes of each tree, reducing long-term safe and useful life expectancy, and significantly increasing risk of tree stem failure and impact with pedestrians, vehicles, and structures as new epicormic shoots (i.e. relatively weakly-attached stems that arise from top pruning cuts made as "internodal cuts") elongate and become the new canopy of each tree.

The problem with top pruning is that the entire canopy of a tree ends up consisting of these weakly-attached epicormic shoots, which then need to be managed by corrective thinning pruning to literally remove the number of stems by as much as 75% or more, cutting them at their attachment points, to allow a lesser number of stems to elongate, expand in girth, and develop higher load-bearing capability at the attachment points (origins) at the stem bases. This requires a high level of pruning skill not easily found in the tree care industry. This type of pruning is referred to as "renovation pruning" or "restoration pruning", and involves a single tree care company crew returning year after year after year to the site to assess additional pruning needs on a tree-by-tree basis, and performing thinning as described above repeatedly, until the canopy is restored. In many cases, trees topped to the severity of these on-site magnolias will never recover to their former condition rating in terms of vigor or structural stability, and will fall into a spiral of decline ending in premature death of the tree(s), and/or develop an elevated risk status due to the profusion of epicormic shoots arising from just under the bark from near the top pruning cuts.

Another problem is that this species is native to the U.S. South, and it therefore performs well in humid hot areas with heavy rainfall. The Santa Clara valley conditions with dry air and little or no rainfall for most of the year are the exact opposite of the native conditions where this tree species originated. Therefore, use of heavy supplemental irrigation year-round is essential for maintaining southern magnolia in decent condition in terms of vigorous growth. It is not considered to be a "climate ready" tree species, and is dependent on high irrigation water volume applications.

(Recommendation #8 continued)

If the trees are to be retained, the following generalized recommendations for maintenance are Best Management Practices (BMP):

8.1. Irrigation: Maintain year-round weekly or twice weekly irrigation at a rate to be determined to adequately maintain soil moisture that supports vigorous new growth.

8.2 Tree Care: Retain a tree care company qualified for and experienced with the ANSI A300 pruning standard known as “restoration pruning” defined in ANSI A300 standard for tree care operations Part 1 (pruning) as “pruning to redevelop structure, form, and appearance of topped or damaged woody plants”. All ANSI A300 pruning standards will need to be adhered to during the tree restoration pruning work. Ideally, an ISA-Certified Arborist will be on-site for at least 25% to 50% of the work to directly monitor and supervise the site pruning crew, as this restoration work is highly-detailed and requires a much higher level of arboriculture skill than standard pruning work.

8.3 Restoration Pruning for Trees #52, 53, 54, 55, 58:

- **Restoration Pruning Method:**

Select a few vigorous sprouts to become the “permanent stems”. This could involve selection of up to two or three stems per each stub or mainstem area of each tree, for a total of (rough estimate) 10 to 15 permanent stems per each tree, or a number determined by the tree care company selected for this work. The number of permanent stems will be different for each tree specimen.

Remove other stems at their attachment points or reduce lengths of others, to encourage growth of the few sprouts selected to become permanent stems. WLCA expects that at least 30% to 60% of the sprouts will have to initially be removed, leaving two or three sprouts remaining per each stub or mainstem on each tree to become the permanent stems, while many remaining stems will have to be “subordinated” through length reduction to discourage their growth as noted above. A somewhat more formalized specification for restoration pruning of a topped tree is noted on the following page, excerpted from 2013 Gilman et al “*Structural Pruning: A Guide for the Green Industry*”, which suggests as a general rule of thumb retaining 33% of the stems as permanent, removing 33% of stems to reduce crowding, and reducing the lengths of the remaining 33% of the stems.

Prune out stubs, dying, and dead material if applicable. Remove stubs as applicable per ANSI A300 pruning cut standards.

- **Re-inspection/Re-Pruning:**

Return 1x/year to inspect each tree for additional pruning needs.

Discourage the growth of other sprouts arising from low elevation by removal or reduction of those sprouts, allowing a new canopy to form consisting of the “permanent stems” that were originally selected and encouraged through selective thinning.

- **Completion date:**

Total number of pruning periods will likely be 1x/year for 4 to 6 years. Expected completion date of restoration pruning: 2026-2028.

Right:

**Excerpt from page 55 Tree Canopy “Restoration” section of a text entitled:
“Structural Pruning: A Guide for the Green Industry” by Gilman, Kempf, Matheny, &
Clark.**

Restoration

Restoration shall consist of selective pruning to redevelop structure, form, and appearance of severely pruned, vandalized, or damaged trees. ANSI A300 (Part 1), Section 6.3 (2008)

Guidelines for pruning to restore damaged trees include the following.

1. Select and allow development of one main stem at or close to the location of each damaged tip that will replace the broken branch (**Figure 4-23, right**). Space the sprouts as far apart as practical to prevent them from crowding one another.
2. Remove or reduce sprouts and branches that appear to be poorly formed or are poorly positioned for future growth. Ideally, the retained sprouts should have plenty of lateral branches and perhaps a slight swelling or collar where the sprout meets the damaged parent branch. A rule of thumb is to remove one-third of the other sprouts and reduce one-third to encourage the retained sprouts to develop lateral branches and good taper.
3. Some of the retained sprouts may have to be reduced to help them develop taper. This prevents all the sprouts from growing too long, and it also makes room for growth and development of lateral branches from the retained sprouts.
4. Some damaged and broken branches that are part of the original structure can be removed altogether if they are too close to others and will not contribute to good structure.
5. A few years later (perhaps sooner if growth rate is rapid), some of the sprouts left intact or shortened in the first restoration pruning might require shortening to allow the remaining ones to develop further.
6. Some heading cuts on sprouts and broken branches may be required, especially in the first or second pruning. Heading cuts may be necessary occasionally when sprouts have grown too long without lateral branches so there are no options for reducing to a lateral.

5.0 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 (21 years)
- 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

6.0 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. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

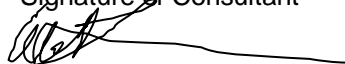
Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot take such considerations into account unless complete and accurate 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.

7.0 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



Walter Levison

DIGITAL BADGES:

ISA CERTIFIED ARBORIST CREDENTIAL:

https://certificates.isa-arbor.com/f1918723-df46-48cc-ace2-c12625530fec?record_view=true

ISA TREE RISK ASSESSMENT QUALIFIED (TRAQ):

https://certificates.isa-arbor.com/d180515f-ab75-440b-9c66-106005e3cf10?record_view=true#gs.hpb30w

8.0 Digital Images





Below: Digital Images by WLCA, archived 10/12/2021, prior to start of construction.

Tag #	Image	Tag #	Image
51		52	

53			54		
55			56		

57			58	
59			60	

61				62		
63				64		

65		66	
67		68	

69				70	
69				70	

9.0 Tree Data Table

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) Remove Tree	(S) Save 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	MAINTENANCE AND PROTECTION
51	<i>Washingtonia robusta</i> NEIGHBOR TREE	Mexican fan palm	21.1	--	--	21.1	25/14	70/70	70% Good	X		Poor					This tree appears to be in a public right of way owned by City of Sunnyvale.	
52	<i>Magnolia grandiflora</i>	Southern magnolia	15.8	--	--	15.8	17/11	20/10	15% Very Poor		X	Poor					Root system damaged and sunburned on grade. Canopy consists of weakly-attached re-sprout growth that has arisen after excessive pruning was for some reason performed, resulting in the tree's original branch and limb architecture having been cut back to stubs (i.e. destroyed).	TPZ, TB, W.
53	<i>Magnolia grandiflora</i>	Southern magnolia	20.5	--	--	20.5	23/15	25/20	23% Poor		X	Poor					(Same notes as for tree #52 above)	TPZ, TB, W.
54	<i>Magnolia grandiflora</i>	Southern magnolia	28.3	--	--	28.3	20/15	25/10	17% Very Poor		X	Poor					(Same notes as for tree #52 above) Note also that roots are confined to a surface plate, with significant visible damage and sunburn desiccation noted.	TPZ, TB, W.

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	MAINTENANCE AND PROTECTION
55	<i>Magnolia grandiflora</i>	Southern magnolia	21.5	--	--	21.5	16/11	15/10	13% Very Poor		X	Poor					(Same notes as for tree #52) Note that on this specimen, resprouting is only occurring on the north, south, and west sides of the remnant tree, but not on the east side.	TPZ, TB, W.
56	<i>Magnolia grandiflora</i>	Southern magnolia	20.8	--	--	20.8	17/13	25/10	17% Very Poor	X		Poor					(All same notes as for tree #52 above).	
57	<i>Pyrus kawakamii</i>	Evergreen pear (ornamental)	13.2	--	--	13.2	23/18	25/20	24% Poor	X		Poor					Trunk taper development good. Tree root system is confined inside a concrete curb bumpout. Shear pressure from trunk and root expansion is causing cracking of the existing curbwork. This tree was topped in the past, resulting in a profusion of new weakly-attached epicormics shoots as the new canopy. This species is susceptible to black spot and to bacterial fireblight.	

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	MAINTENANCE AND PROTECTION
58	<i>Magnolia grandiflora</i>	Southern magnolia	15.3	--	--	15.3	16/13	25/10	17% Very Poor		X	Poor					<p>Roots damaged on grade from years of turf mowing via machinery. Sunburn has damaged the upper surfaces of the woody roots.</p> <p>Tree was topped back to stubs (same as tree #52). It is not clear why this severe method of pruning was used, as it completely destroyed the aesthetics, structure, and long term viability of every magnolia specimen on site.</p>	TPZ, TB, W.
59	<i>Ligustrum sp.</i> NEIGHBOR TREE	Privet species	11.3	--	--	11.3	25/17	30/25	27% Poor		X	Poor	South		GR on north side.		Tree's north side of canopy facing the parking lot was severely pruned back to clear the airspace of parking stalls.	TPZ, TB, W.
60	<i>Pyrus kawakamii</i>	Evergreen pear (ornamental)	11.7	--	--	11.7	20/25	50/30	37% Poor	X		Poor					Tree's north side of canopy facing the parking lot was severely pruned back to clear the airspace of parking stalls.	

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%)	Remove Tree	Save 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	MAINTENANCE AND PROTECTION
61	<i>Ligustrum</i> sp. NEIGHBOR TREE	Privet species	3.7	--	--	3.7	13/8	20/15	17% Very Poor		X	Poor	South				Severely pruned to clear the parking lot airspace (north side of canopy). This tree is declining due to soil moisture deficit (drought stress). Note this tree may not technically be a "tree". Most planning staff don't consider trees <4" diameter as "trees". Contact staff to verify.	TPZ, TB, W.
62	<i>Ligustrum</i> sp. NEIGHBOR TREE	Privet species	3.4	3.3	2.5	9.2	15/13	15/15	15% Very Poor		X	Poor					Bark inclusion type fork (elevated risk of splitout) at 6 inches above grade. Decline of canopy noted, due to soil moisture deficit.	TPZ, TB, W.
63	<i>Ligustrum</i> sp. NEIGHBOR TREE	Privet species	11.4	--	--	11.4	25/20	15/15	15% Very Poor		X	Poor	South				Tree was severely pruned to remove the north side of canopy to clear parking lot.	TPZ, TB, W.
64	<i>Ligustrum</i> sp. NEIGHBOR TREE	Privet species	6	6	5	21 (four stems)	20/20	20/16	18% Very Poor		X	Poor	South				Bark inclusion at grade. Decline of canopy foliar density due to soil moisture deficit.	TPZ, TB, W.
65	<i>Ligustrum</i> sp. NEIGHBOR TREE	Privet species	4	3	3	10	18/12	20/10	15% Very Poor		X	Poor	South				Tree was severely pruned to remove north side of canopy (stems facing the subject lot parking lot). Decline of canopy due to soil moisture deficit.	TPZ, TB, W.

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	MAINTENANCE AND PROTECTION
66	<i>Ligustrum sp.</i>	Privet species	9.2	--	--	9.2	20/18	30/20	25% Poor	X		Poor	South				Soil moisture deficit is causing canopy decline. Multiple 6" diameter pruning cut wounds were made to remove at least 50% of the original live biomass of this tree, which is considered severe pruning.	
67	<i>Pittosporum undulatum</i>	Victorian box	3	3	2	8	20/13	15/15	15% Very Poor		X	Poor					Advanced stage decay of twigs in canopy noted, likely due directly to soil moisture deficit (drought stress). Note however that there is a known issue called "Victorian box decline" that affects older (mature) specimens of this tree species, causing severe decline and/or death of the tree within a relatively short time frame. There is no cure or treatment for this decline syndrome.	TPZ, TB, W.

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	MAINTENANCE AND PROTECTION
68	<i>Ligustrum sp.</i>	Privet species	8.4	--	--	8.4	22/18	40/25	29% Poor	X		Poor					<p>Soil moisture deficit causing decline of canopy.</p> <p>The lowermost 50% of the canopy was removed by pruning, which has destroyed this tree's natural branch architecture (structure) permanently, raising its center of gravity to a higher elevation, and removing its ability to add sugars and starches to the lower mainstem area. As noted elsewhere, it is not clear as to why incredibly severe pruning was performed on many of the site trees in the first place, effectively destroying the safety of and value of most of the trees for the remainder of their lives in the landscape.</p>	
69	<i>Washington robusta</i> NEIGHBOR TREE	Mexican fan palm	16.8	--	--	16.8	37/15	75/75	75% Good		X	Poor					<p>Tree is actually on neighbor property. 27 feet of clear stem from base to frond initiation elevation. This is a tree species that performs well in the Bay Area with little maintenance.</p>	TPZ, TB, W.

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	MAINTENANCE AND PROTECTION
70	<i>Magnolia grandiflora</i> NEIGHBOR TREE	Southern magnolia	21.6	--	--	21.6	35/40	35/35	35% Poor		X	Poor					<p>Located approximately 8 feet west of the property line on a neighbor site that has irrigated turf grass covering root zone.</p> <p>Roots are damaged on grade from both years of mechanical mowing, and from sunburn. Roots tend to grow on the surface of heavily compacted urban soils when they are irrigated frequently in a "shallow" manner.</p> <p>Extensive twig death noted in the upper 50% of the canopy, due likely to soil moisture deficit (drought), even though the tree appears to theoretically be well irrigated (the turf grass may be pulling most of the applied irrigation water before it reaches the tree's feeder root system).</p>	TPZ, TB, W.

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

Legend / Tree Maintenance and Protection Codes Used in Above Tree Data Table:

TPZ: 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. Use of less robust type fencing such as orange color plastic snow fencing mounted on steel posts is not recommended, as it is too easily damaged and knocked over by construction machinery, rendering the protective fencing useless.

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.

Tree Conservation Suitability (TCS) Ratings¹

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.

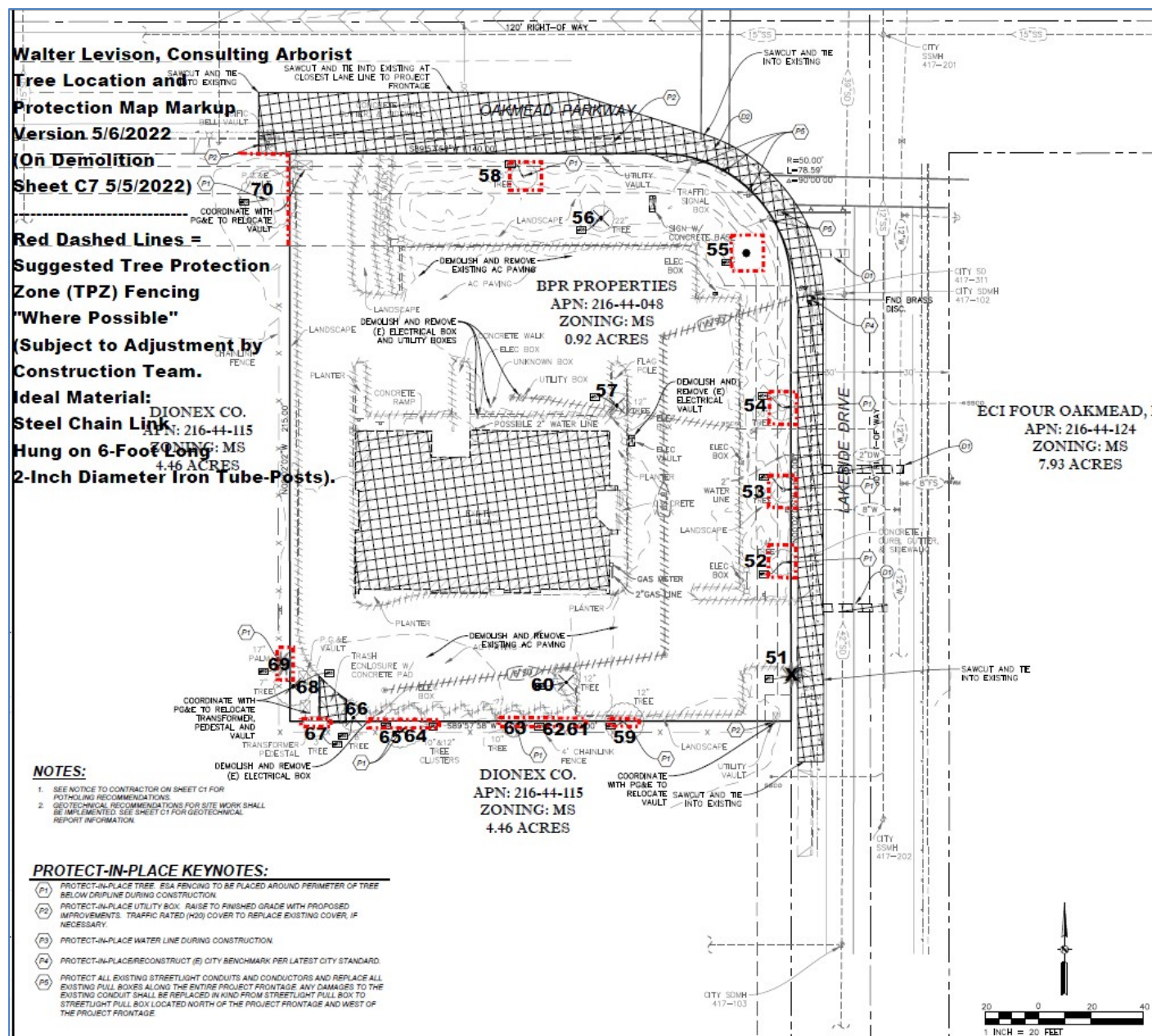
MON: A Project Arborist must be present to monitor specific work as noted for each tree.

10.0 Tree Location Map Mark-ups

Map 1 on this page is sheet C7 demolition plan, version 5/5/2022, overlaid with WLCA's tree tag numbers #51 through #70.

Map 2 tree map markup on the following report page shows the actual civil surveyor plotted trunk base locations for most of the 20 trees included in the WLCA study population.

RIGHT: MAP 1

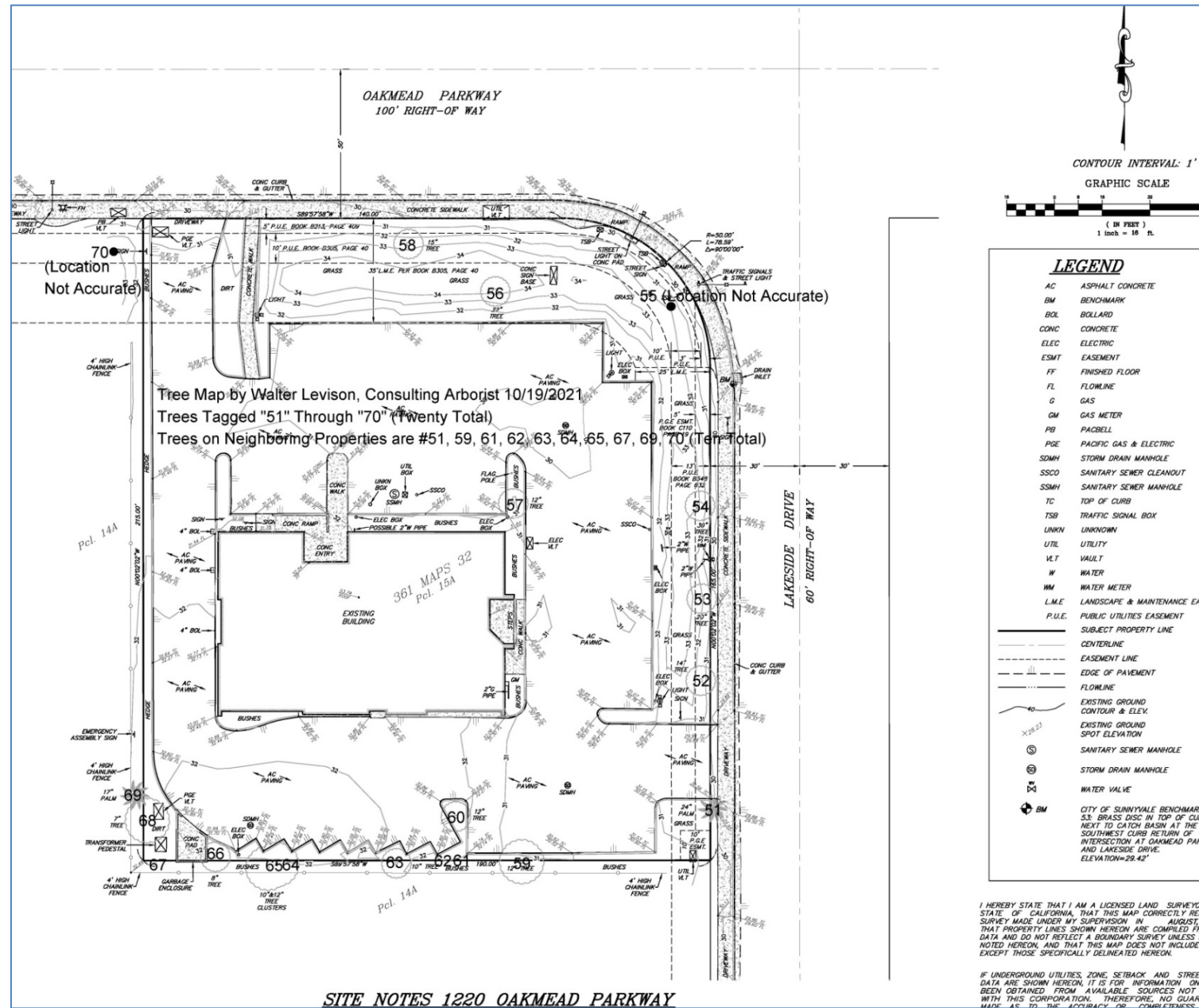


RIGHT: MAP 2

11.0
Attached:
Appraisal Worksheet

An appraisal worksheet detailing appraised values of all survey trees of all diameter size classes is a required component of all arborist reports being submitted to City of Sunnyvale, California planning division Staff.

Appraisal information 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 indicated at the right hand edge of the worksheet attached to the end of this WLCA arborist report.





Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition (2019)*
"Functional Replacement Method / Trunk Formula Technique"
Site: 1220 Oakmead, Sunnyvale, California. 10/20/2021

Tree Tag #	Name (Initials)	WCISA Species 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	Depreciation Factors		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)	Line 9 (UTC) Unit Tree Cost per Sq Inch (M Divided by L)	Trunk Area (TA) ((dia. x dia.) x 0.785)	Line 10 Basic Functional Replacement Cost (BFRC) = (OxN)	Line 11 Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ	Rounded-off Appraised Values	
51	Wr	37	3x (\$25 per clear trunk foot x height) = 3 x (\$25 X 18) = \$1,350. \$1,350 X condition = \$1,350 X .70 = \$945.															\$945
52	Mg	21	0.2	0.1	0.3	15%	15.8	80%	90%	3	3.8	\$250.00	\$65.79	195.97	\$ 12,893	\$ 1,346	\$1,350	
53	Mg	21	0.25	0.2	0.3	22%	20.5	80%	90%	3	3.8	\$250.00	\$65.79	329.90	\$ 21,704	\$ 3,477	\$3,480	
54	Mg	21	0.25	0.1	0.3	15%	28.3	80%	90%	3	3.8	\$250.00	\$65.79	628.70	\$ 41,362	\$ 4,542	\$4,540	
55	Mg	21	0.15	0.1	0.3	14%	21.5	80%	90%	3	3.8	\$250.00	\$65.79	362.87	\$ 23,873	\$ 2,363	\$2,360	
56	Mg	21	0.25	0.1	0.3	15%	20.8	80%	90%	3	3.8	\$250.00	\$65.79	339.62	\$ 22,344	\$ 2,453	\$2,450	
57	Pk	30	0.25	0.2	0.5	25%	13.2	60%	90%	1	2.09	\$250.00	\$119.62	136.78	\$ 16,361	\$ 2,231	\$2,230	
58	Mg	21	0.25	0.1	0.3	15%	15.3	80%	90%	3	3.8	\$250.00	\$65.79	183.76	\$ 12,090	\$ 1,327	\$1,330	
59	Lsp.	19	0.3	0.25	0.6	31%	11.3	50%	90%	3	3.8	\$250.00	\$65.79	100.24	\$ 6,595	\$ 920	\$920	
60	Pk	30	0.5	0.3	0.6	38%	11.7	40%	90%	1	2.09	\$250.00	\$119.62	107.46	\$ 12,854	\$ 1,735	\$1,740	
61	Lsp.	19	0.2	0.15	0.6	23%	3.7	40%	90%	3	3.8	\$250.00	\$65.79	10.75	\$ 707	\$ 57	\$60	



Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition (2019)*
"Functional Replacement Method / Trunk Formula Technique"
Site: 1220 Oakmead, Sunnyvale, California. 10/20/2021

Tree Tag #	Name (Initials)	WCISA Species 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	Depreciation Factors		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)	Line 9	Trunk Area (TA) ((dia. x dia.) x 0.785)	Line 10	Line 11	Rounded-off Appraised Values
								Functional Limitations	External Limitations				(UTC) Unit Tree Cost per Sq Inch (M Divided by L)		Basic Functional Replacement Cost (BFRC) = (OxN)	Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ	
62	Lsp.	19	0.15	0.15	0.7	23%	multi stem total	40%	90%	3	3.8	\$250.00	\$65.79	23.00	\$ 1,513	\$ 127	\$130
63	Lsp.	19	0.15	0.15	0.5	20%	11.4	40%	90%	3	3.8	\$250.00	\$65.79	102.02	\$ 6,712	\$ 489	\$490
64	Lsp.	19	0.2	0.16	0.4	20%	multi stem total	40%	90%	3	3.8	\$250.00	\$65.79	89.00	\$ 5,855	\$ 426	\$430
65	Lsp.	19	0.2	0.1	0.35	15%	multi stem total	40%	90%	3	3.8	\$250.00	\$65.79	27.00	\$ 1,776	\$ 98	\$100
66	Lsp.	19	0.3	0.2	0.5	26%	9.2	40%	90%	3	3.8	\$250.00	\$65.79	66.44	\$ 4,371	\$ 409	\$410
67	Pu	26	0.15	0.15	0.5	20%	multi stem total	40%	90%	1	2.09	\$250.00	\$119.62	17.00	\$ 2,033	\$ 148	\$150
68	Lsp.	19	0.4	0.25	0.5	31%	8.4	40%	90%	3	3.8	\$250.00	\$65.79	55.39	\$ 3,644	\$ 407	\$410
69	Washingtonia robusta (same as tree #51). 3x (\$25 per clear trunk foot x height) = 3 x (\$25 X 27) = \$2,025. \$2,025 X condition = \$2,025 X 0.75 = \$1,518.75. Rounded to nearest 10 is \$1,520.																\$1,520
70	Mg	21	0.35	0.35	0.8	42%	21.6	80%	90%	3	3.8	\$250.00	\$65.79	366.25	\$ 24,095	\$ 7,243	\$7,200



Valuation Appraisal Worksheet Based on *Guide for Plant Appraisal, 10th Edition (2019)*
"Functional Replacement Method / Trunk Formula Technique"
Site: 1220 Oakmead, Sunnyvale, California. 10/20/2021

Tree Tag #	Name (Initials)	WCISA Species 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	Depreciation Factors		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)	Line 9 (UTC) Unit Tree Cost per Sq Inch (M Divided by L)	Trunk Area (TA) ((dia. x dia.) x 0.785)	Line 10 Basic Functional Replacement Cost (BFRC) = (OxN)	Line 11 Depreciated Functional Replacement Cost (DFRC) = PxGxIxJ	Rounded-off Appraised Values
<p>NOTES:</p> <p>1. OVERALL CONDITION RATING RANGE per the new 10th edition, 2nd Printing, of Guide for Plant Appraisal (2019):</p> <p>Excellent: 81-100%</p> <p>Good: 61-80%</p> <p>Fair: 41-60%</p> <p>Poor: 21-40%</p> <p>Very Poor: 6-20%</p> <p>Dead: 0-5%</p> <p>ROUNDING: Values over \$5,000 are rounded to nearest \$100. Values below \$5,000 are rounded to nearest \$10.</p> <p>2. MULTI STEM TREES: For trees with multiple mainstems, the total of all mainstem cross sectional areas was used as the "trunk area" calculation. This total cross sectional area is a numeric value in square inches (sq. in.).</p> <p>3. 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 WLCA arborist report tree data table. WLCA attempted to keep overall condition rating values as consistent as possible between the two data</p>																Total Appraised Value of All Study Trees	\$32,245