California Tree and Landscape Consulting, Inc.
CalTLC
TENDER LOVING CARE FOR YOUR TREES

February 10, 2023

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AMENDED ARBORIST REPORT, TREE INVENTORY, CONSTRUCTION IMPACT ASSESSMENT AND TREE PROTECTION PLAN

RE: Sharon Heights Golf Course Renovation, City of Menlo Park, California

EXECUTIVE SUMMARY

Sharon Heights Golf and Country Club (SHGCC) contacted California Tree and Landscape Consulting, Inc. to document the trees for the comprehensive golf course renovation including improving drainage, turf replacement with a lower water use turf, and removal and replacement of trees that impact the turf quality by shade and water competition. SHGCC requested an arborist report and tree inventory suitable for submittal to the City of Menlo Park. This is a Final Arborist Report, Tree Inventory, Construction Impact Assessment and Tree Protection Plan for obtaining a Heritage Tree Permit and filing of plans to renovate the property.

Gordon Mann, ISA Certified Arborist WE-0151AM, Ed Stirtz, ISA Certified Arborist WE-510A, Thomas M. Stein, ISA Certified Arborist WE-12854A, and Tyler Thompson, ISA Certified Arborist WE-12751A visited the property on Monday February 28, 2022, and Ed Stirtz and Tom Stein visited the property on Tuesday, March 1, 2022, to provide species identification, measurements of DBH and canopy, field condition notes, recommended actions, ratings, and approximate locations for the trees on the site. The site has been revisited and the proposed tree removals have been adjusted going through the permit process. Approximately 900 trees were evaluated on this property for this project, and all protected trees impacted by the project according to the City of Menlo Park Municipal Code, Chapter 13.24[1] have been included in this report. There are 8 dead trees in a separate permit application; 92 Poor condition trees, 78 Heritage trees and 14 undersized trees; and 258 Fair condition and better trees, 251 Heritage trees and 7 undersized trees are the total trees proposed for removal and mitigation.

A total of 359 trees (338 Heritage and 21 undersized) are proposed for removal in this report, and all are growing on the golf course property. No trees on adjacent properties are included in the assessment or will be impacted by the project. The site has been inspected and the trees to be removed and retained have been revised after several reviews and permit submittals all based upon the needs of the renovation for turf solar accessibility, drainage improvements, golfer safety, air movement, irrigation conservation with reclaimed water, and long term playability of the course.

[1] Any tree protected by the City's Municipal Code will require replacement according to its appraised value if it is damaged beyond repair as a result of construction. In addition, any time development-related work is recommended to be supervised by a Project Arborist, it must be written in the report to describe the work plan and mitigation work. The Project Arborist shall provide a follow-up letter documenting the mitigation has been completed to specification.

The inspections and project reviews have been performed by CalTLC was using the latest plans for the proposed tree removals. Those choices have been reviewed and discussed, and the plans modified. The most recent inspection was January 17, 2023 where the entire design team met on the property and discussed the needs, benefits and logistics for the project. The final inspection of the entire course finalized the list of the trees proposed to be retained and removed.

Table 1 shows the trees that were inspected and are being proposed for removal for the Heritage Tree Permit.

TABLE 1

Tree Species	Total Trees Inventoried	Fair and Better Condition	Poor Condition	Dead Trees
Coast redwood, *Sequoia sempervirens*	314	249	65	6
Monterey Pine, *Pinus radiata*	3	0	3	2
Ash species	2	0	2	0
Eucalyptus species	7	1	6	0
Monterey Cypress, *Cupressus macrocarpa*	1	0	1	0
Incense Cedar, *Calocedrus decurrens*	1	0	1	0
Canary Island Pine, *Pinus canariensis*	1	1	0	0
Dead Heritage Trees (3 Redwood 1 Monterey Pine)	4		4	
subtotal	333	251	82	
Emergency Removal Valley Oak	1			
Undersized trees	17	7	10	
TOTAL	**351**	**258**	**92**	**8**

There are a total of 351 trees to be removed for the project that guide the proposed mitigation requirements. The breakdown of the trees are :
251 Heritage trees in fair or better condition to be removed for the development; 78 Heritage Trees will be removed due to poor condition (including 1 Heritage Valley Oak that was a separately approved emergency removal), 4 Heritage Trees that are dead, and 10 undersized trees in poor condition. There are eight (8) dead Heritage trees which will be removed under a separate permit with the City. These 8 dead trees were not yet approved to be removed.

A site survey was conducted by the maintenance Superintendent to capture the total number of trees on the golf course property. Those trees not involved with the construction projects will be retained on the site. There are approximately 1,302 total trees on the property, with around 900 growing on the golf course and around 400 growing on the Country Club property. The retention was estimated to be: 1302 – 359 = 943 trees being retained on site. This calculation places the percentage of total protected trees to be removed for the project at 27.6%.

The value of the proposed removals were calculated in 2 methods: the appraised value for the fair condition and better trees being removed for development; and the value of the poor condition trees being removed for tree health rating using the diameter inch replacement range from Menlo Park's monetary value of replacement trees. The fair and better condition trees were appraised at $625,900. The poor and worse trees were calculated to be valued at $154,800. The total value of trees requiring replacement is $780,700.

The scope of this project is typical for golf course renovations as new science, turf, drainage, irrigation and golf course management evolve. Both Menlo Country Club in Woodside renovated their course in 2014 and Palo Alto Hills Golf and Country Club is renovating their course in two phases 2020 and 2021. These golf course renovations all have significant tree removals as part of the process, and most of the trees were planted by the golf course over time.

A component of every Heritage Tree Permit is the mitigation for tree removals. Menlo Park requires an equivalent value be replaced for the trees removed. This report includes the value of the trees being removed and a comprehensive planting plan is being designed that includes the turf, groundcover, shrubs, and trees. There are approximately 200 trees currently proposed to be planted as mitigation for the removals for this project. The new plantings will be strategically placed for course play, solar accessibility, irrigation and maintenance, and aesthetics. The intent is to replace the full value of the trees proposed to be removed by a combination of adequate quantity and enhanced larger container sizes for faster contribution to the course renovation. If more trees are needed to achieve the mitigation value, more trees will be selectively located to contribute to the new design. The 208 trees proposed to be planted at a value of $1,510,000 in designated locations. There may be some changes in planting locations as the ability to plant trees on the Hetch Hetchy right-of-way may not be possible due to the agreement in place.

ASSIGNMENT

Perform an inspection of the site to document the presence and condition of trees protected by the City of Menlo Park that will be impacted by the proposed golf course renovation project. The study area for this effort includes the golf course grounds as delineated in the field by the property fences. Trees on adjacent parcels were not included in this project and are shown as off-site on the plans and not impacted by the site improvements, as the soil impacts are in fairways, greens, and tee boxes all away from adjacent parcels and the edges of the course property.

Prepare a report of findings including the appraised value of the trees to meet the City of Menlo Park's Heritage Tree Ordinance requirements. All protected trees proposed for removal are included in the inventory as shown on the plans provided for the inspection. It was found that 9 trees on the proposed removals are undersized and not protected trees.

The entire design team met at the golf course on Friday, May 27, 2022 for an all-day meeting to review the plans. After reviewing the design and site needs and a full tour of each hole and found which trees should be proposed for removal and retention for the final design. The design and permit process is very dynamic and after submittals to the City and review comments, the team held the final meeting on January 18, 2023. A permit application was submitted and reviewed by the City. This is the final approved tree list and proposed mitigation after the discussion and agreement was reached on tree numbers.

METHODS

Table 1 in this report is the detailed inventory of the trees. The full report details will further explain our findings.

The protected trees evaluated as part of this report have a numbered tag that was placed on each one that is 1-1/8" x 1-3/8", green anodized aluminum, "acorn" shaped, and labeled: CalTLC, Auburn, CA with 1/4" pre-stamped tree number and Tree #. They are attached with a natural-colored 16d nail, installed at approximately 6 feet above ground level on the approximate north side of the tree. The tag should last ~5-10+ years depending on the species, before it is enveloped by the trees' normal growth cycle.

The appraisals included in this report for fair condition and better trees that are being removed for the renovation of the golf course are based on the 10th Edition of the *Guide for Plant Appraisal*[2] (see Appendix 4). The trunk formula technique of appraisal provides a basic cost to replace a tree, determined by its species and size. The tree costs are extrapolated from that of the most commonly available and used tree for landscaping, which at this time in Northern California has been determined to be a 24" box specimen.[3] Based on the size and value of the tree as a 24" box, the species are valued at $53.19 to $112.78 per square inch of trunk area. Per request by the City of Menlo Park, the diameter of multi-trunk trees is measured below the lowest branching.

The basic value is depreciated by the tree's condition, which is considered a function of its health, structure, and form ratings and expressed as a percentage of the basic value. The result is termed the deterioration of the tree, deducted by depreciation.
The trees are further depreciated by the functional and external limitations that may impact their ability to grow to their normal size, shape and function. Functional limitations include limited soil volume, adequate growing space, poor soil quality, reclaimed water, etc. External limitations include easements, government regulations and ownership issues beyond the control of the tree's owner.

The final value is rounded to the nearest $100 to obtain the appraisal result.

The removal of poor condition trees is being performed due to the poor health or structural condition of the trees. These trees are being removed whether the renovation is completed or not due to the poor condition of the trees. The mitigation for the poor condition trees is based on the Menlo Park Section 13.24.090 criteria for tree removals and replacement tree requirement chart below:

HERITAGE TREE TRUNK DIAMETER	REPLACEMENT MONETARY VALUE
OAK TREE 10-15 INCHES DIAMETER	(1) #5 CONTAINER TREE, $100
HERITAGE TREE 15-20 INCHES DIAMETER	(1) #15 CONTAINER TREE, $200
HERITAGE TREE >20 -30 INCHES DIAMETER	(1) 24-INCH BOX TREE, $400
HERITAGE TREE >30 -40 INCHES DIAMETER	(1) 36-INCH BOX TREE, CONTAINER, $1,200
HERITAGE TREE >40 -50 INCHES DIAMETER	(1) 48-INCH BOX TREE CONTAINER, $5,000
HERITAGE TREE >50 INCHES DIAMETER	(1) 60-INCH BOX TREE CONTAINER, $7,000

Any undersized trees are not protected by the Heritage Tree ordinance and do not require mitigation.

OBSERVATIONS AND CONCLUSIONS

The site is an existing golf course set adjacent to residences, businesses, and a freeway. The vegetation is comprised of ornamental plants, with a small quantity of native plants growing on the site. Most of the Redwoods growing on the course were planted by the members as the course was developed approximately 50 years ago on the approximately 60-year-old course. The Redwoods have been overplanted and are growing very close together, closer in proximity than current tree planting distances are spaced. The Redwoods are large solar blockers, and heavy water users. A photograph of the course in the early days with few trees is included in the appendix images.

The plan to renovate the golf course is based on the desires for the course to be more sustainable. Improving sustainability includes: improve the quality of the turf; change the soil type the turf is growing in to improve drainage and aeration; improve the total course drainage which supports improved turf and tree growing conditions; revise,

[2] 2018. Council of Tree and Landscape Appraisers. *Guide for Plant Appraisal*, 10th Edition, 2nd Printing. International Society of Arboriculture, Atlanta, GA

[3] 2004. *Western Chapter Species Classification and Group Assignment.* Western Chapter, International Society of Arboriculture. Porterville, CA

improve, reduce, and micro manage the irrigation system with more valves and heads in smaller coverage areas; improve the solar accessibility to key areas of turf; reduce overall water use; reduce the impacts to the tree types that do not perform well with reclaimed water irrigation; and provide a substantial replanting that increases the number of native and lower water using trees growing on the golf course. Additionally, a statement from the Fire Marshal, Jon Johnston, of the Menlo Park Fire Protection District said that the thinning the dense tree canopy would be an improvement in reducing the potential of a wildfire spreading from the outskirts of the woodland areas to the Menlo Park populated areas.

All the trees are located on the golf course property along the playable portions of the course, fairways, tee boxes, and greens. The proposed tree removals will remove the larger trees on the course that have the greatest impact on water use, shading the turf, and limiting air movement. The course renovation is intended to improve solar accessibility to the turfgrass, improve drainage issues, reduce the water use on the site, create space for other existing trees to grow more openly, create space to plant native oaks and sycamores, and a larger diversity of smaller appropriate tree species that will improve air circulation on the turf which is going to reduce fungicide and pesticide use. The pests and diseases that are associated with solar inaccessibility to turf, drainage issues, and stagnant air will be reduced by the turf renovation and improved drainage installation.

The plan is to improve the quality of the golf course play and the quality of the golf course turf while reducing water use; using reclaimed water that has already been invested in for the site; and improve the drainage on the playable areas of the course that currently are subject to flooding, excessive soil moisture that affects both turf and trees, and restricts the quality of the golf course playability.

The project entire is being approached from a sustainable perspective including:

- utilize the maximum amount of reclaimed water possible on the site to reduce potable water use
- reduce the total water use on the course for turf and trees
- improve the quality of plants by growing plants better suited to reclaimed water and growing in turf
- increase the number and percentage of low water use plants and turf
- improve the drainage to increase the playability of the course through all seasons and improve turf and tree quality
- retain a natural feel to the course and continue to utilize trees along fairways to separate play and add intrigue to the course play
- improve the sun accessibility to the most sensitive turf areas on greens and tee boxes and critical drainage areas

The total scope of the project is intended to create a higher quality golf experience on a sustainably managed golf course environment. Because of the requirements to preserve and protect Heritage Trees in Menlo Park, the course is not being clear cut or removing every tree. Approximately 27.6 % of the trees growing on the entire golf course area are being removed. A total of 359 trees are proposed for removal out of the 1,302 trees on the property as calculated from the aerial photos and site inventories. The improvement in course drainage and turf quality will benefit by removing trees that are impacting the solar accessibility. The current tree water use will be impacted by changes to the drainage system. The course is using reclaimed water for irrigation. Replacing Redwoods, that do not perform well in reclaimed water irrigation, with trees that will perform better with reclaimed irrigation will improve the quality of the landscape on the golf course.

The purpose and intent of the project is to resolve the issues that are challenging to the golf course management and playability and improve the course's sustainability. This includes: the health of trees such as Redwoods that have not performed well with the use of reclaimed water; trees that are too large and impact turf with too much shade; trees that are too high water use; trees with large root systems competing with the turf; and retain a natural feel to the golf course with interesting natural elements.

Replacement species will be smaller eventual sizes, better salt tolerances, and lower water use than the over-populated Redwoods currently growing on the site. The replacements will increase the species diversity and reduce the impacts of an invasive or species focused insect or disease. The smaller trees will improve solar accessibility for the turf.

The tree replacement is designed to meet the City's Heritage Tree Mitigation requirements. The trees proposed to be planted should be:

- 35 feet height at maturity as required by the mitigation criteria
- have characteristics to match the site conditions with turf and drainage
- do not have the density and shade capacity to impact large areas of turf
- are lower water use
- respond well to reclaimed water
- increased diversity from the high % of Redwoods currently on the site
- Not spaced closer than 25 feet apart

Appendix 2 contains the tree value data for the trees to be removed.

Appendix 3 contains the tree data.

The appraisal for fair and better condition trees was determined by reviewing the tree conditions and presenting fair reasonable, credible depreciations. There are 3 factors for depreciation in the 10th Edition. The condition (Physical Deterioration, page 62) was the factor used for the condition rating. The 10th edition sates on page 43 that there are a wide range of options or assessing plant condition. The condition should incorporate health, structure, and form. We used these characteristics to place the trees in the following condition classes with the rating for each class:

Excellent	9 (90%)
Good	7 (70%)
Fair	5 (50%)
Poor	3 (30%)
Very Poor	1 (10%)
Dead	0

The other depreciations are Functional Limitations and External Limitations.

The Functional Limitations include the use of reclaimed water for the site irrigation, the turf management focus, the monoculture of trees in most of the planting, demonstrated by the large number of Redwoods proposed for removal, the herbicide use on the turf, excessive size and future large growth of the Redwood trees, and the trees planted closer together than the City's preferred 25 foot spacing for replacement trees. The Redwoods were depreciated at .25 (25%) due to their poor performance in reclaimed water, and the other species at .45 (45%).

The external limitations include the City's Heritage Tree Ordinance, the management of the site to reduce shade on high value turf greens and tee boxes, current drainage issues they are addressing for improving the turf conditions, and placement of trees and effect on golf play. All species were depreciated at .35 (35%).

The mitigation value for poor and worse condition trees is based on the City of Menlo Park's Section 13.24.090(2), applicants may use the following monetary value of the replacement trees to help design their landscape plans for development-related removals.

Recommended Removals of Hazardous, Defective or Unhealthy Trees

At the time of the inspection, all the trees were listed for removal for the proposed project. Trees that were found to have significant defects, compromised health, and/or structural instability are proposed to be removed based on the tree condition.

Construction Impact Assessment

This Arborist Report, Tree Inventory, Construction Impact Assessment and Tree Protection Plan is intended to provide Pivot General Contracting & Design, Inc., the City of Menlo Park, and other members of the development team a detailed *pre-development review* of the species, size, and current structure and vigor of the trees within the proposed project area. We reviewed the site plan provided for the course renovation. The perceived construction impacts to protected trees are summarized below. All the trees are growing on the golf course in turf locations. The proposed construction

The permit application proposes 359 be removed, approximately 27.6% of the trees on the entire site. The remaining trees on the golf course will be protected and experience minor to moderate impact from the turf renovation and drainage installation. The inventory did not include the trees on the golf course that are planned to be retained. The plans show the trees to be retained. There are other trees outside of the golf play area, around the clubhouse, clubhouse and course landscaping, and trees on adjacent properties that may overhang the golf course and are well outside of the proposed construction were not included in the inventory.

The City of Menlo Park requires mitigation to be planted on the site to equal the value of the Heritage trees that are removed or pay the mitigation fee to the City. To meet the Menlo Park Mitigation requirements, the total value of removed trees are proposed be replaced on site. Larger nursery stock size replacement trees will be utilized in important locations for golf course play and scenic impact.

Any tree protected by the City's Municipal Code will require replacement according to its appraised value if it is damaged beyond repair as a result of construction. Any time development-related work is recommended to be supervised by a Project Arborist, it must be written in the report to describe the work plan and mitigation work. The Project Arborist shall provide a follow-up letter documenting the mitigation has been completed to specification.

The total value of the proposed trees to be removed was found to be appraised value for the fair condition and better trees at an appraised value of $625,900. The value of the poor condition and worse trees was found using the diameter inch range tree replacement requirement, and found to be $154,800. The total proposed removal value is $780,700.

The proposed planting is using 208 large, boxed trees at a planting value of $1,510,000.

Discussion

Trees to be retained on the property need to be protected from normal construction practices if they are to remain healthy and viable on the site. Our recommendations are based on experience, and County ordinance requirements, so as to enhance tree longevity. This requires their root zones remain intact and viable, despite heavy equipment being on site, and the need to install foundations, driveways, underground utilities, and landscape irrigation systems. Simply walking and driving on soil has serious consequences for tree health.

Following is a summary of Impacts to trees during construction and Tree Protection measures that should be incorporated into the site plans in order to protect the trees. Once the plans are approved, they become the document

that all contractors will follow. ***The plans become the contract between the owner and the contractor, so that only items spelled out in the plans can be expected to be followed. Hence, all protection measures, such as fence locations, mulch requirements and root pruning specifications must be shown on the plans.***

Some minor changes to trees proposed for removal are being updated on the plan set. The tree list has been updated and revised plan sheets will be re-incorporated into the report at a later date.

SUMMARY OF TREE PROTECTION MEASURES

Hire a Project Arborist to help ensure protection measures are incorporated into the site plans and followed. The Project Arborist should, in cooperation with the Engineers and/or Architects:

- Identify the Root Protection Zones on the final construction drawings, prior to bidding the project.
- Show the placement of tree protection fences, as well as areas to be irrigated, fertilized and mulched on the final construction drawings.
- Clearly show trees for removal on the plans and mark them clearly on site. A Contractor, who employs an ISA Certified Arborist, should perform tree and stump removal. All stumps within the root zone of trees to be preserved shall be ground out using a stump router or left in place. **No trunk within the root zone of other trees shall be removed using a backhoe or other piece of grading equipment**.
- Prior to any grading, or other work on the site that will come within 50’ of any tree to be preserved:
    1. Irrigate (if needed) and place a 3” layer of chip mulch over the protected root zone of all trees that will be impacted.
    2. Erect Tree Protection Fences. Place boards against trees located within 3’ of construction zones, even if fenced off. The tree protection fencing proposed for this project is orange plastic fence, 4 feet high. The length of fencing required and the layout around trees is difficult to install with long chain link sections. The fencing is going to be installed by the golf course staff. The fencing will be moved and set in place prior to any construction activities in that area. The construction will be phased across the course and the entire course does not need to be protected the entire time. The egress and access areas, and the storage areas will need to be protected the entire time. The rest pf the project will be protected prior to construction and as the project moves across the course. Tree protection is not proposed during the tree removal operations as the felling of trees will damage the fencing.
    3. Remove lower foliage that may interfere with equipment PRIOR to having grading or other equipment on site. The Project Arborist should approve the extent of foliage elevation, and oversee the pruning, performed by a contractor who is an ISA Certified Arborist.
- For grade cuts, expose roots by hand digging, potholing or using an air spade and then cut roots cleanly prior to further grading outside the tree protection zones.
- For fills, if a cut is required first, follow as for cuts.
- Where possible, specify geotextile fabric and/or thickened paving, re-enforced paving, and structural soil in lieu of compacting, and avoid root cutting as much as possible, prior to placing fills on the soil surface. Any proposed retaining wall or fill soil shall be discussed with the engineer and arborist in order to reduce impacts to trees to be preserved.
- Clearly designate an area on the site outside the drip line of all trees where construction materials may be stored, and parking can take place. No materials or parking shall take place within the root zones of protected trees.

- Design utility and irrigation trenches to minimize disturbance to tree roots. Where possible, dig trenches with hydro-vac equipment or air spade, placing pipes underneath the roots, or bore the deeper trenches underneath the roots.
- Include on the plans an Arborist inspection schedule to monitor the site during (and after) construction to ensure protection measures are followed and make recommendations for care of the trees on site, as needed. Refer to Appendix 3 for post construction instructions.
- The tree removals will be performed by a logging specialist and tree protection will need to be overseen by the project arborist.
- The tree protection fencing material is proposed to be orange plastic fencing staked on steel stakes. The extensive quantity and length of fencing, and the contours of the project do not align well with chain link panels.

General Tree protection measures are included as Appendix 6. These measures need to be included on the Site, Grading, Utility and Landscape Plans. A final report of recommendations specific to the plan can be completed as part of, and in conjunction with, the actual plans. This will require the arborist working directly with the engineer and architect for the project. If the above recommendations are followed, the amount of time required by the arborist for the final report should be minimal.

TERMS USED IN THE REPORT

Species of trees is listed by our local common name and botanical name by genus and species.

DBH (diameter breast high) is normally measured at 4'6" (54" above the average ground, height but if that varies then the location where it is measured is noted here. A steel diameter tape was used to measure the trees.

Canopy radius is measured in feet. It is the farthest extent of the crown composed of leaves and small twigs measured by a steel tape. This measurement often defines the Critical Root Zone (CRZ) or Protection Zone (PZ), which is a circular area around a tree with a radius equal to this measurement.

Actions listed are recommendations to improve health or structure of the tree. Trees in public spaces require maintenance. If a tree is to remain and be preserved, then the tree may need some form of work to reduce the likelihood of failure and increase the longevity of the tree. Preservation requirements and actions based on a proposed development plan are not included here.

Arborist Rating is subjective to condition and is based on both the health and structure of the tree. All of the trees were rated for condition, per the recognized national standard as set up by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) on a numeric scale of 5 (being the highest) to 0 (the worst condition, dead). The rating was done in the field at the time of the measuring and inspection.

Table A – Ratings Descriptions

No problem(s)	5	excellent
No apparent problem(s)	4	good
Minor problem(s)	3	fair
Major problem(s)	2	poor
Extreme problem(s)	1	hazardous, non-correctable
Dead	0	dead

Rating #0: This indicates a tree that has no significant sign of life.

Rating #1: The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a dangerous situation.

Rating #2: The tree has major problems. If the option is taken to preserve the tree, its condition could be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, fertilization, etc. If the recommended actions are completed correctly, hazard can be reduced and the rating can be elevated to a 3. If no action is taken the tree is considered a liability and should be removed.

Rating #3: The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated.

Rating #4: The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future hazard can be reduced and more serious health problems can be averted.

Rating #5: No problems found from a visual ground inspection. Structurally, these trees have properly spaced branches and near perfect characteristics for the species. Highly rated trees are not common in natural or developed landscapes. No tree is ever perfect especially with the unpredictability of nature, but with this highest rating, the condition should be considered excellent.

Notes indicate the health, structure and environment of the tree and explain why the tree should be removed or preserved. Additional notes may indicate if problems are minor, extreme or correctible.

Remove is the mitigation option that the tree be removed. The mitigation option will normally be based either on poor structure or poor health and is indicated as follows:

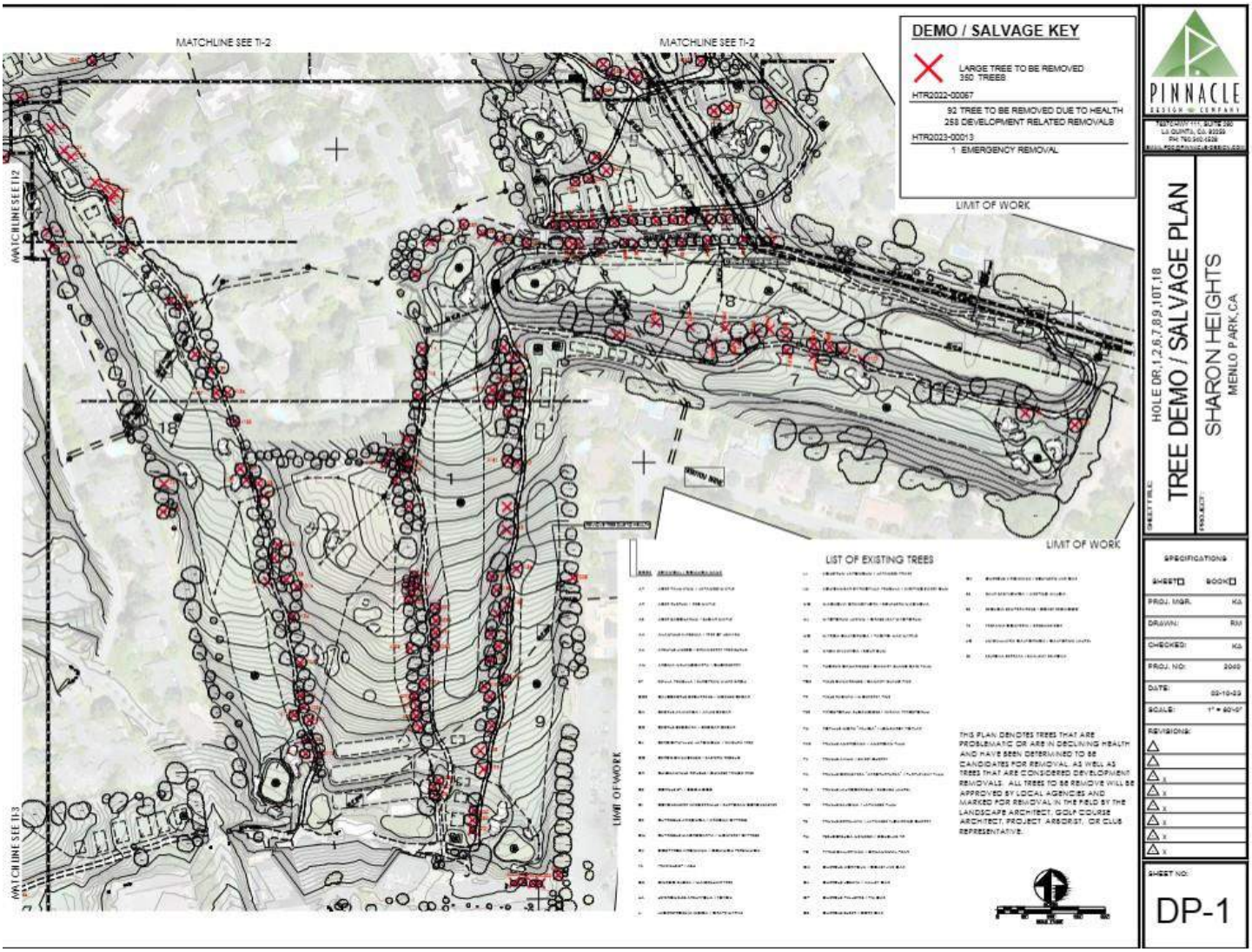
Yes H – Tree is unhealthy
Yes S – Tree is structurally unsound

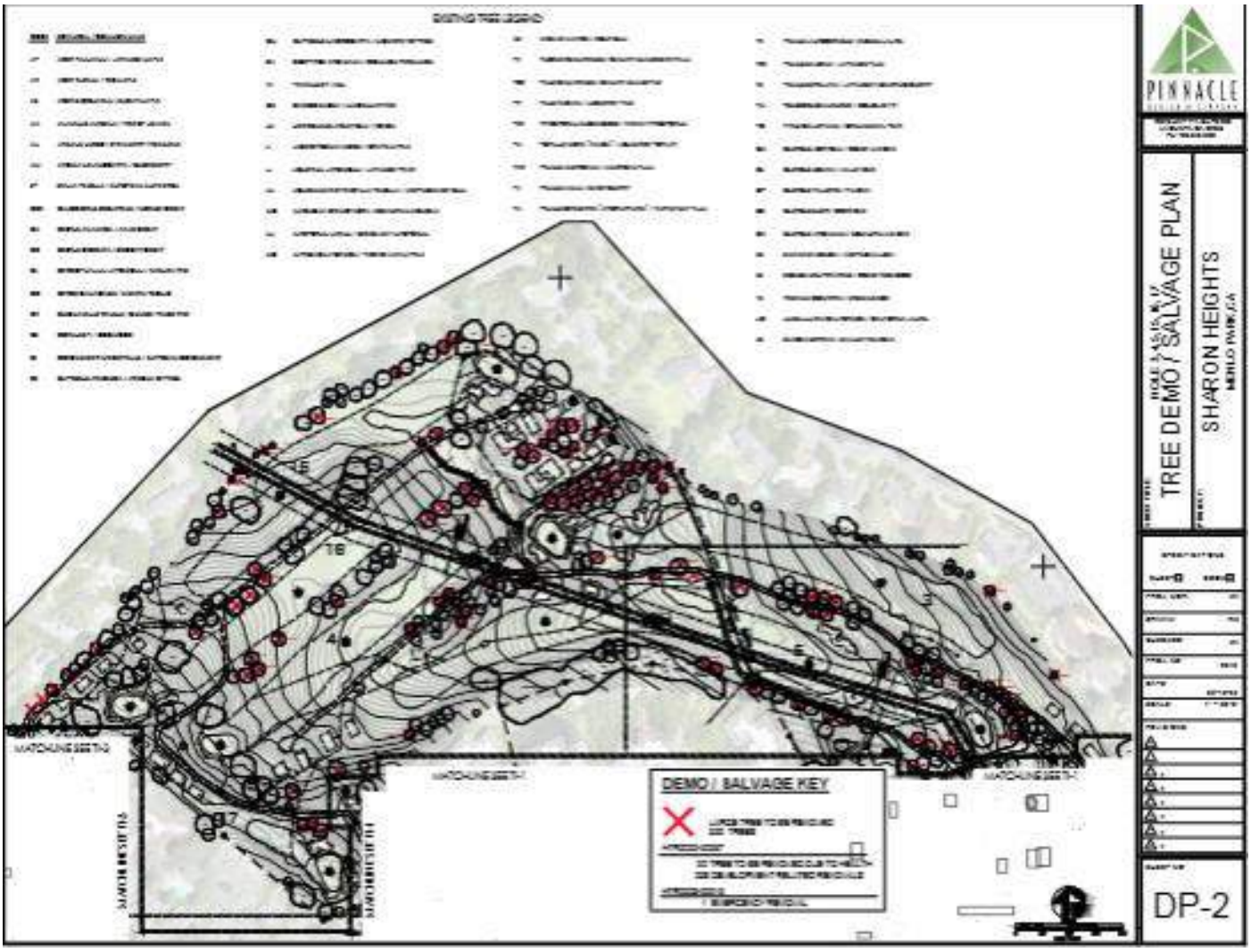
Report Prepared by:

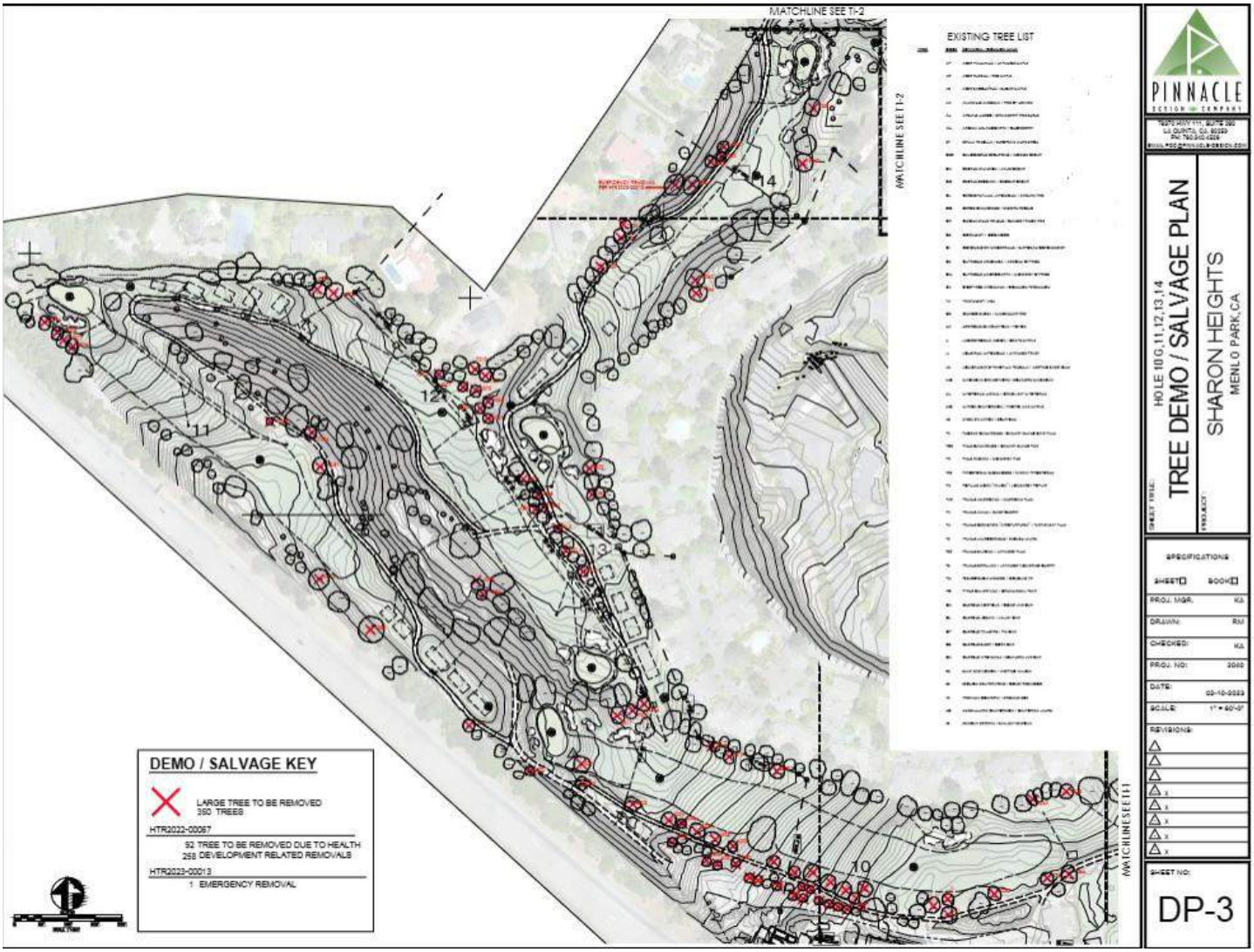
Gordon Mann
Consulting Arborist and Urban Forester
Registered Consulting Arborist #480
ISA Certified Arborist and Municipal Specialist #WE-0151AM
CaUFC Certified Urban Forester #127
ISA Qualified Tree Risk Assessor

Enc.: Appendix 1 – Site Plans provided for inspection
Appendix 2 – Tree Value Data List and Aerial Images
Appendix 3 – Tree List
Appendix 4 – General Practices for Tree Protection
Appendix 5 – Photographs
Appendix 6 – Tree Protection Exhibit and Specifications
Appendix 7 – Tree Replacement Plan
Appendix 8 - Terms

APPENDIX 1 – SITE PLANS PROVIDED FOR INSPECTION




PINNACLE
TREE DEMO / SALVAGE PLAN
SHARON HEIGHTS
DEMO / SALVAGE KEY
DP-2


MATCHLINE SEE T-2
EXISTING TREE LIST
MATCHLINE SEE T-2
DEMO / SALVAGE KEY
LARGE TREE TO BE REMOVED
350 TREES
HTR2022-00057
92 TREE TO BE REMOVED DUE TO HEALTH
258 DEVELOPMENT RELATED REMOVALS
HTR2023-00013
1 EMERGENCY REMOVAL
MATCHLINE SEE T-1
PINNACLE
HOLE 10,11,12,13,14
TREE DEMO / SALVAGE PLAN
SHARON HEIGHTS
MENLO PARK,CA
SPECIFICATIONS
SHEET
BOOK
PROJ. MGR.
DRAWN:
CHECKED:
PROJ. NO:
DATE:
SCALE:
REVISIONS:
SHEET NO:
DP-3

APPENDIX 2 –TREE VALUE DATA LISTS

Sharon Hts Course Renovation Fair Condition and Better
Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Depre-ciated rep. cost rounded to $100	Reason for Removal
4001	Coast redwood	25	490.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$1,141.61	$1,100	Development
4002	Coast redwood	15	176.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$9,393.85	$410.98	$400	Development
4003	Coast redwood	15	176.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$9,393.85	$410.98	$400	Development
4004	Coast redwood	20	314.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$16,700.17	$730.63	$700	Development
4005	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4006	Coast redwood	26	530.66	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$1,234.77	$1,200	Development
4008	Coast redwood	67	3523.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$187,417.69	$8,199.52	$8,200	Development
4009	Coast redwood	49	1884.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$100,242.79	$4,385.62	$4,400	Development
4010	Coast redwood	34	907.46	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,263.50	$2,111.53	$2,100	Development
4011	Coast redwood	47	1734.07	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$92,226.70	$4,034.92	$4,000	Development
4013	Coast redwood	26	530.66	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$1,234.77	$1,200	Development
4014	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4015	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4016	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4020	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4021	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4022	Coast redwood	43	1451.47	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$77,196.55	$3,377.35	$3,400	Development
4023	Coast redwood	43	1451.47	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$77,196.55	$3,377.35	$3,400	Development
4025	Coast redwood	30	706.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$37,575.39	$1,643.92	$1,600	Development
4026	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4027	Coast redwood	24	452.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$1,052.11	$1,100	Development
4028	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4029	Coast redwood	38	1133.54	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$2,637.58	$2,600	Development
4030	Coast redwood	30	706.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$37,575.39	$1,643.92	$1,600	Development
4031	Coast redwood	48	1808.64	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$96,192.99	$4,208.44	$4,200	Development
4032	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4033	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4036	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4037	Coast redwood	43	1451.47	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$77,196.55	$3,377.35	$3,400	Development
4038	Coast redwood	47	1734.07	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$92,226.70	$4,034.92	$4,000	Development

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Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Depre-ciated rep. cost rounded to $100	Reason for Removal
4039	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4040	Coast redwood	31	754.39	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,122.16	$1,755.34	$1,800	Development
4041	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4042	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4043	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development
4044	Coast redwood	44	1519.76	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$3,536.26	$3,500	Development
4045	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4047	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4048	Coast redwood	14	153.86	0.5	0.25	0.35	2	2.46	4.75	Coast redwood	252.63	53.19	$8,183.08	$0.00	$0	undersized
4050	Coast redwood	21	346.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$18,411.94	$805.52	$800	Development
4051	Coast redwood	48	1808.64	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$96,192.99	$4,208.44	$4,200	Development
4053	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4055	Coast redwood	5	19.63	0.5	0.25	0.35	2	2.46	4.75	Coast redwood	252.63	53.19	$1,043.76	$0.00	$0	undersized
4056	Coast redwood	4	12.56	0.5	0.25	0.35	2	2.46	4.75	Coast redwood	252.63	53.19	$668.01	$0.00	$0	undersized
4058	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4059	Coast redwood	36	1017.36	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$2,367.25	$2,400	Development
4060	Coast redwood	41	1319.59	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$70,182.48	$3,070.48	$3,100	Development
4061	Coast redwood	24	452.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$1,052.11	$1,100	Development
4062	Coast redwood	30	706.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$37,575.39	$1,643.92	$1,600	Development
4063	Coast redwood	33	854.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,989.15	$2,000	Development
4064	Coast redwood	50	1962.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$104,376.08	$4,566.45	$4,600	Development
4065	Coast redwood	49	1884.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$100,242.79	$4,385.62	$4,400	Development
4066	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4067	Coast redwood	22	379.94	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$20,207.21	$884.07	$900	Development
4068	Coast redwood	24	452.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$1,052.11	$1,100	Development
4069	Coast redwood	23	415.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,085.98	$966.26	$1,000	Development
4070	Coast redwood	20	314.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$16,700.17	$730.63	$700	Development
4071	Coast redwood	21	346.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$18,411.94	$805.52	$800	Development
4072	Coast redwood	22	379.94	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$20,207.21	$884.07	$900	Development
4075	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development

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4076	Coast redwood	42	1384.74	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$73,647.76	$3,222.09	$3,200	Development
4077	Coast redwood	23	415.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,085.98	$966.26	$1,000	Development
4078	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development
4081	Coast redwood	33	854.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,989.15	$2,000	Development
4086	Coast redwood	18	254.34	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$13,527.14	$591.81	$600	Development
4087	Coast redwood	17	226.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$12,065.87	$527.88	$500	Development
4088	Coast redwood	18	254.34	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$13,527.14	$591.81	$600	Development
4089	Coast redwood	36	1017.36	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$2,367.25	$2,400	Development
4090	Coast redwood	44	1519.76	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$3,536.26	$3,500	Development
4091	Coast redwood	47	1734.07	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$92,226.70	$4,034.92	$4,000	Development
4092	Coast redwood	24	452.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$1,052.11	$1,100	Development
4093	Coast redwood	43	1451.47	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$77,196.55	$3,377.35	$3,400	Development
4094	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4095	Coast redwood	58	2640.74	0.5	0.25	0.35	4	1.69	2.24	Coast redwood	252.63	112.78	$297,825.96	$13,029.89	$13,000	Development
4096	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4097	Coast redwood	44	1519.76	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$3,536.26	$3,500	Development
4099	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4100	Coast redwood	23	415.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,085.98	$966.26	$1,000	Development
4101	Coast redwood	25	490.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$1,141.61	$1,100	Development
4102	Coast redwood	26	530.66	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$1,234.77	$1,200	Development
4103	Coast redwood	26	530.66	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$1,234.77	$1,200	Development
4104	Coast redwood	23	415.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,085.98	$966.26	$1,000	Development
4105	Coast redwood	24	452.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$1,052.11	$1,100	Development
4106	Coast redwood	20	314.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$16,700.17	$730.63	$700	Development
4107	Coast redwood	22	379.94	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$20,207.21	$884.07	$900	Development
4108	Coast redwood	16	200.96	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$10,688.11	$467.60	$500	Development
4109	Coast redwood	21	346.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$18,411.94	$805.52	$800	Development
4110	Coast redwood	18	254.34	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$13,527.14	$591.81	$600	Development
4112	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4113	Coast redwood	31	754.39	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,122.16	$1,755.34	$1,800	Development

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4114	Coast redwood	49	1884.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$100,242.79	$4,385.62	$4,400	Development
4115	Coast redwood	45	1589.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$84,544.62	$3,698.83	$3,700	Development
4116	Coast redwood	31	754.39	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,122.16	$1,755.34	$1,800	Development
4118	Coast redwood	18	254.34	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$13,527.14	$591.81	$600	Development
4119	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development
4120	Coast redwood	18	254.34	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$13,527.14	$591.81	$600	Development
4121	Coast redwood	36	1017.36	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$2,367.25	$2,400	Development
4122	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4123	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4124	Coast redwood	43	1451.47	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$77,196.55	$3,377.35	$3,400	Development
4125	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4126	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4127	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4128	Coast redwood	25	490.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$1,141.61	$1,100	Development
4129	Coast redwood	34	907.46	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,263.50	$2,111.53	$2,100	Development
4130	Coast redwood	13	132.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$7,055.82	$0.00	$0	undersized
4132	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development
4133	Coast redwood	33	854.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,989.15	$2,000	Development
4134	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4136	Coast redwood	18	254.34	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$13,527.14	$591.81	$600	Development
4137	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development
4140	Coast redwood	30	706.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$37,575.39	$1,643.92	$1,600	Development
4142	Coast redwood	20	314.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$16,700.17	$730.63	$700	Development
4143	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4144	Coast redwood	38	1133.54	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$2,637.58	$2,600	Development
4145	Coast redwood	44	1519.76	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$3,536.26	$3,500	Development
4146	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4148	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4149	Coast redwood	25	490.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$1,141.61	$1,100	Development
4150	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development

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Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Depre-ciated rep. cost rounded to $100	Reason for Removal
4151	Coast redwood	22	379.94	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$20,207.21	$884.07	$900	Development
4152	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development
4153	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development
4154	Coast redwood	24	452.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$1,052.11	$1,100	Development
4155	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4156	Coast redwood	63	3115.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$165,707.46	$7,249.70	$7,200	Development
4157	Coast redwood	55	2374.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$126,295.06	$5,525.41	$5,500	Development
4158	Coast redwood	62	3017.54	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$160,488.66	$7,021.38	$7,000	Development
4159	Coast redwood	41	1319.59	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$70,182.48	$3,070.48	$3,100	Development
4160	Coast redwood	39	1193.99	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$63,502.41	$2,778.23	$2,800	Development
4161	Coast redwood	38	1133.54	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$2,637.58	$2,600	Development
4162	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4163	Coast redwood	45	1589.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$84,544.62	$3,698.83	$3,700	Development
4164	Coast redwood	39	1193.99	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$63,502.41	$2,778.23	$2,800	Development
4165	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4166	Coast redwood	39	1193.99	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$63,502.41	$2,778.23	$2,800	Development
4167	Coast redwood	39	1193.99	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$63,502.41	$2,778.23	$2,800	Development
4168	Coast redwood	50	1962.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$104,376.08	$4,566.45	$4,600	Development
4169	Coast redwood	41	1319.59	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$70,182.48	$3,070.48	$3,100	Development
4170	Coast redwood	39	1193.99	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$63,502.41	$2,778.23	$2,800	Development
4171	Coast redwood	44	1519.76	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$3,536.26	$3,500	Development
4172	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development
4173	Coast redwood	36	1017.36	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$2,367.25	$2,400	Development
4176	Coast redwood	44	1519.76	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$3,536.26	$3,500	Development
4178	Coast redwood	23	415.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,085.98	$966.26	$1,000	Development
4179	Coast redwood	36	1017.36	0.5	0.25	0.35	4	1.69	2.24	Coast redwood	252.63	112.78	$114,739.13	$5,019.84	$5,000	Development
4180	Coast redwood	51	2041.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$108,592.87	$4,750.94	$4,800	Development
4181	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4184	Coast redwood	51	2041.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$108,592.87	$4,750.94	$4,800	Development
4186	Coast redwood	42	1384.74	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$73,647.76	$3,222.09	$3,200	Development

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Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Depre-ciated rep. cost rounded to $100	Reason for Removal
4187	Coast redwood	51	2041.79	0.5	0.25	0.35	4	1.69	2.24	Coast redwood	252.63	112.78	$230,275.06	$10,074.53	$10,100	Development
4188	Coast redwood	26	530.66	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$1,234.77	$1,200	Development
4189	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development
4190	Coast redwood	31	754.39	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,122.16	$1,755.34	$1,800	Development
4191	Coast redwood	36	1017.36	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$2,367.25	$2,400	Development
4192	Coast redwood	41	1319.59	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$70,182.48	$3,070.48	$3,100	Development
4193	Coast redwood	51	2041.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$108,592.87	$4,750.94	$4,800	Development
4194	Coast redwood	38	1133.54	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$2,637.58	$2,600	Development
4195	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4196	Coast redwood	45	1589.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$84,544.62	$3,698.83	$3,700	Development
4197	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4198	Coast redwood	38	1133.54	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$2,637.58	$2,600	Development
4199	Coast redwood	38	1133.54	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$2,637.58	$2,600	Development
4201	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4202	Coast redwood	12	113.04	0.5	0.25	0.35	2	2.46	4.75	Coast redwood	252.63	53.19	$6,012.06	$0.00	$0	undersized
4203	Coast redwood	19	283.39	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$15,071.91	$659.40	$700	Development
4204	Coast redwood	14	153.86	0.5	0.25	0.35	2	2.46	4.75	Coast redwood	252.63	53.19	$8,183.08	$0.00	$0	undersized
4205	Coast redwood	13	132.67	0.5	0.25	0.35	2	2.46	4.75	Coast redwood	252.63	53.19	$7,055.82	$0.00	$0	undersized
4206	Coast redwood	30	706.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$37,575.39	$1,643.92	$1,600	Development
4207	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development
4209	Coast redwood	24	452.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$1,052.11	$1,100	Development
4210	Coast redwood	26	530.66	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$1,234.77	$1,200	Development
4211	Coast redwood	29	660.19	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$1,536.15	$1,500	Development
4213	Coast redwood	16	200.96	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$10,688.11	$467.60	$500	Development
4214	Coast redwood	25	490.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$1,141.61	$1,100	Development
4215	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4216	Coast redwood	34	907.46	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,263.50	$2,111.53	$2,100	Development
4218	Coast redwood	42	1384.74	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$73,647.76	$3,222.09	$3,200	Development
4219	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4221	Valley Oak	22	379.94	0.5	0.25	0.35	2	1.69	2.24	Valley Oak	252.63	112.78	$42,850.11	$1,874.69	$1,900	Development

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Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Depre-ciated rep. cost rounded to $100	Reason for Removal
4222	Coast redwood	25	490.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$1,141.61	$1,100	Development
4223	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4224	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4225	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4226	Coast redwood	33	854.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,989.15	$2,000	Development
4227	Coast redwood	30	706.50	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$37,575.39	$1,643.92	$1,600	Development
4228	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development
4229	Coast redwood	44	1519.76	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$3,536.26	$3,500	Development
4230	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development
4231	Coast redwood	22	379.94	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$20,207.21	$884.07	$900	Development
4232	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4235	Coast redwood	35	961.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$2,237.56	$2,200	Development
4236	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4245	Coast redwood	25	490.63	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$1,141.61	$1,100	Development
4246	Coast redwood	31	754.39	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,122.16	$1,755.34	$1,800	Development
4247	Coast redwood	42	1384.74	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$73,647.76	$3,222.09	$3,200	Development
4248	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4249	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4250	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
4251	Coast redwood	49	1884.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$100,242.79	$4,385.62	$4,400	Development
4252	Coast redwood	48	1808.64	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$96,192.99	$4,208.44	$4,200	Development
4253	Coast redwood	20	314.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$16,700.17	$730.63	$700	Development
4254	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
4258	Coast redwood	34	907.46	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,263.50	$2,111.53	$2,100	Development
4259	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4260	Coast redwood	28	615.44	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$1,432.04	$1,400	Development
4261	Coast redwood	33	854.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,989.15	$2,000	Development
4262	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4263	Coast redwood	40	1256.00	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$2,922.53	$2,900	Development
4265	Coast redwood	58	2640.74	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$140,448.45	$6,144.62	$6,100	Development

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Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Depre-ciated rep. cost rounded to $100	Reason for Removal
4306	Coast redwood	31.6	783.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$41,690.31	$1,823.95	$1,800	Development
4308	Coast redwood	32.5	829.16	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$44,098.89	$1,929.33	$1,900	Development
4309	Coast redwood	26.6	555.43	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$29,540.94	$1,292.42	$1,300	Development
4310	Coast redwood	29.3	673.91	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,842.33	$1,568.10	$1,600	Development
4313	Coast redwood	43.3	1471.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$78,277.47	$3,424.64	$3,400	Development
4315	Coast redwood	36.3	1034.39	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$55,014.13	$2,406.87	$2,400	Development
4316	Coast redwood	23.5	433.52	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$23,056.68	$1,008.73	$1,000	Development
4317	Coast redwood	34	907.46	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,263.50	$2,111.53	$2,100	Development
4320	Coast redwood	31.7	788.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$41,954.59	$1,835.51	$1,800	Development
4321	Coast redwood	34.6	939.77	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$49,981.95	$2,186.71	$2,200	Development
4322	Coast redwood	41	1319.59	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$70,182.48	$3,070.48	$3,100	Development
4328	Coast redwood	34.6	939.77	0.7	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$49,981.95	$3,061.39	$3,100	Development
4329	Coast redwood	19.6	301.57	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$16,038.85	$701.70	$700	Development
4330	Coast redwood	35.4	983.73	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$52,319.97	$2,289.00	$2,300	Development
4335	Coast redwood	23.4	429.83	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,860.87	$1,000.16	$1,000	Development
4336	Coast redwood	41.8	1371.58	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$72,948.02	$3,191.48	$3,200	Development
4337	Coast redwood	33.2	865.26	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$46,019.00	$2,013.33	$2,000	Development
4339	Coast redwood	36	1017.36	0.7	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$3,314.15	$3,300	Development
4341	Coast redwood	39.4	1218.60	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$64,811.70	$2,835.51	$2,800	Development
4342	Canary Island Pine	28.9	655.64	0.5	0.45	0.35	2	1.69	2.24	Canary Island Pine	252.63	112.78	$73,943.88	$5,823.08	$5,800	Development
4343	Coast redwood	49.5	1923.45	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$102,298.99	$4,475.58	$4,500	Development
4348	Coast redwood	31.2	764.15	0.7	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,641.54	$2,489.29	$2,500	Development
4349	Coast redwood	29.6	687.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$36,580.06	$1,600.38	$1,600	Development
4350	Coast redwood	33	854.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,989.15	$2,000	Development
4353	Coast redwood	40.4	1281.25	0.9	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$68,143.38	$5,366.29	$5,400	Development
4355	Coast redwood	43.5	1485.42	0.9	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$79,002.25	$6,221.43	$6,200	Development
4356	Coast redwood	30.2	715.95	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$38,078.06	$1,665.92	$1,700	Development
4358	Coast redwood	42.2	1397.96	0.7	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$74,350.84	$4,553.99	$4,600	Development
4359	Coast redwood	33	854.87	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,989.15	$2,000	Development
4362	Coast redwood	45.2	1603.79	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$85,297.80	$3,731.78	$3,700	Development

Sharon Heights Course Renovation Poor Condition and Worse Tree List

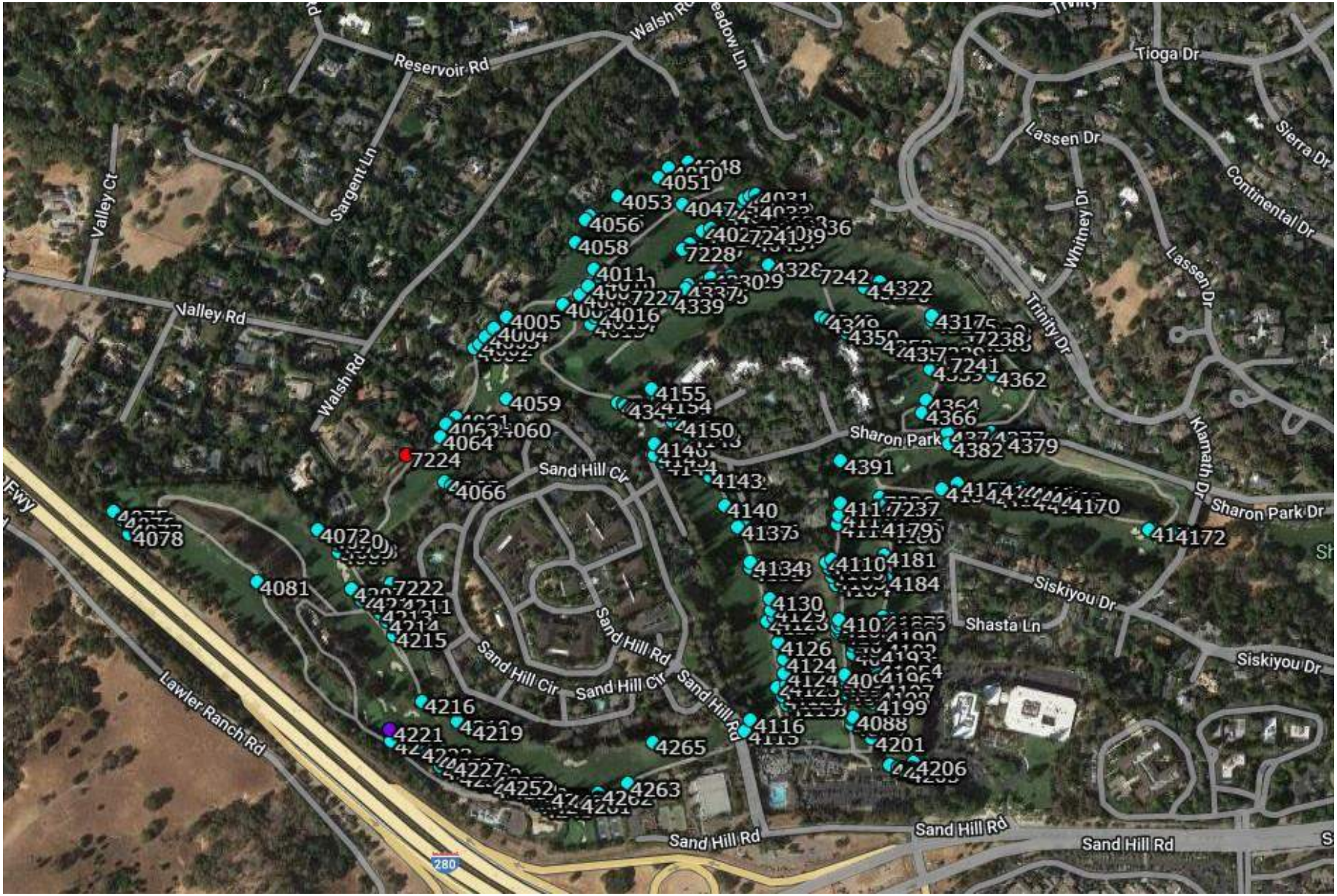
Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Depre-ciated rep. cost rounded to $100	Reason for Removal
4364	Coast redwood	46	1661.06	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$3,865.05	$3,900	Development
4366	Coast redwood	60.3	2854.33	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$151,808.33	$6,641.61	$6,600	Development
4374	Coast redwood	42.5	1417.91	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$75,411.72	$3,299.26	$3,300	Development
4377	Coast redwood	34.1	912.81	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,547.82	$2,123.97	$2,100	Development
4379	Coast redwood	44	1519.76	0.7	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$80,828.84	$4,950.77	$5,000	Development
4382	Coast redwood	34.2	918.17	0.7	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,832.97	$2,991.02	$3,000	Development
4391	Coast redwood	51.5	2082.02	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$110,732.58	$4,844.55	$4,800	Development
7222	Coast redwood	33.6	886.23	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$47,134.57	$2,062.14	$5,000	Development
7224	Blue Gum eucalypt	19.9	310.87	0.45	0.25	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$16,533.59	$651.01	$700	Development
7227	Coast redwood	41.2	1332.49	0.45	0.25	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$70,868.85	$2,790.46	$2,800	Development
7228	Coast redwood	62.2	3037.04	0.45	0.25	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$161,525.74	$6,360.08	$6,400	Development
7236	Coast redwood	43	1451.47	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$77,196.55	$3,377.35	$3,400	Development
7237	Coast redwood	38.8	1181.77	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$62,852.77	$2,749.81	$2,700	Development
7238	Coast redwood	37	1074.67	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$2,500.59	$2,500	Development
7239	Coast redwood	27	572.27	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$1,331.58	$1,300	Development
7240	Coast redwood	36	1017.36	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$2,367.25	$2,400	Development
7241	Coast redwood	32	803.84	0.5	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,870.42	$1,900	Development
7242	Coast redwood	36	1017.36	0.35	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$1,657.07	$1,700	Development
Total	258 trees, 251 protected trees proposed for removal; 7 trees are undersized; total mitigation calculation - $625,900 based on appraised value, all protected trees being removed for the course renovation													$623,904.99	Rounded Total	$625,900.00

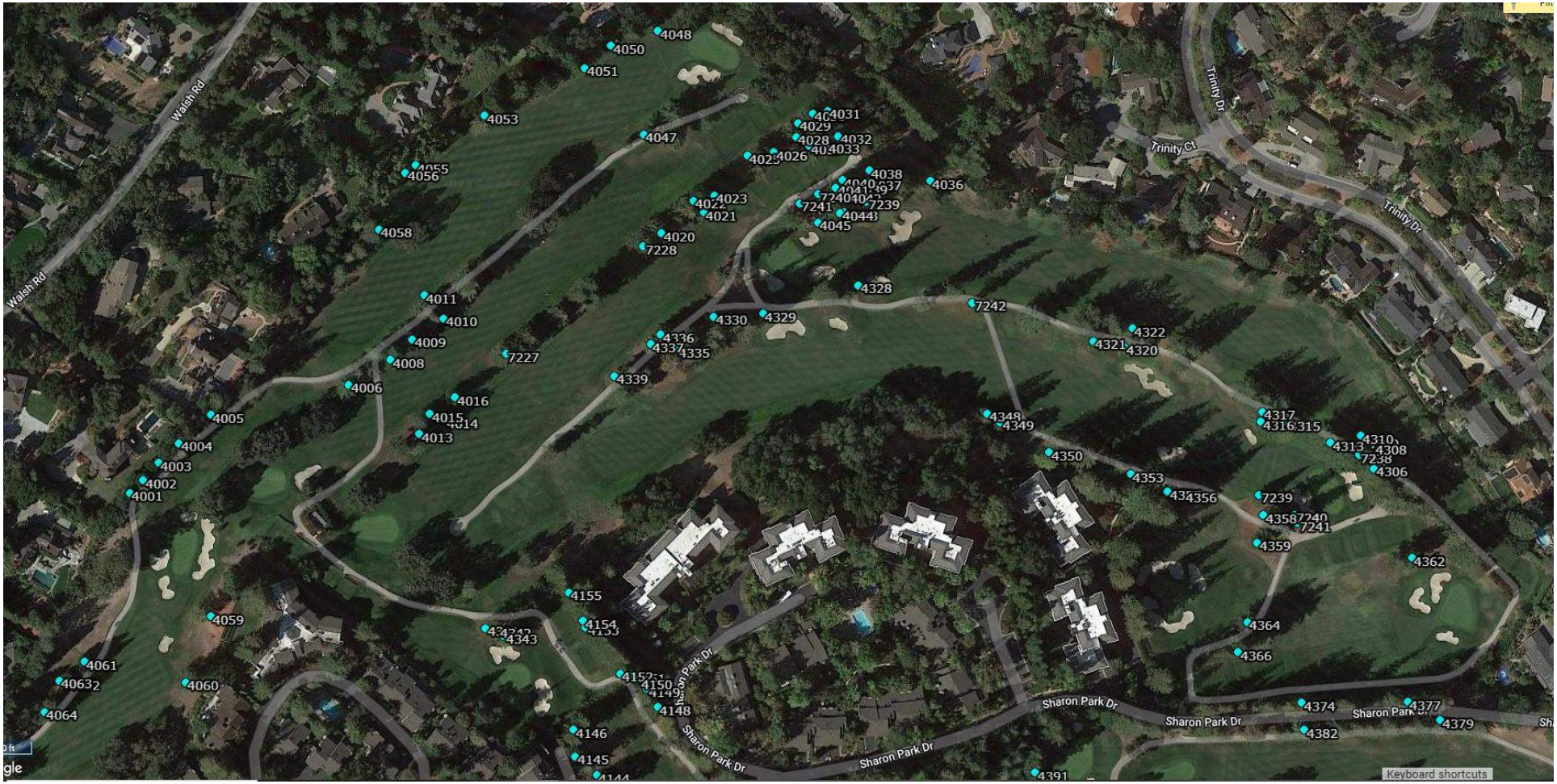
Color Key

248	Protected trees Redwood
3	protected non-redwood
7	undersized trees

TREE LIST PAGE 9 OF 9

AERIAL IMAGES OF FAIR AND BETTER CONDITION TREES IN APPROXIMATE LOCATIONS

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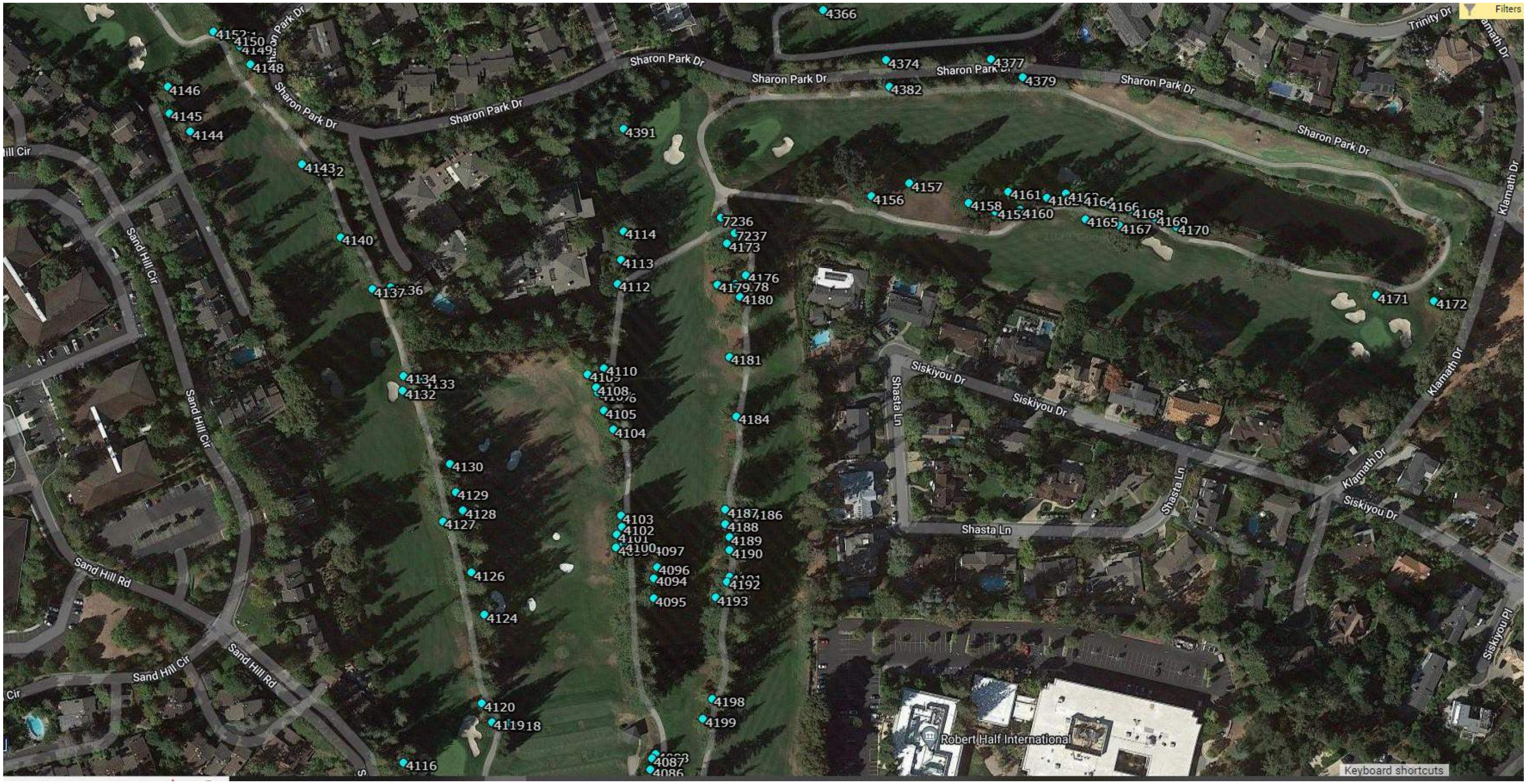
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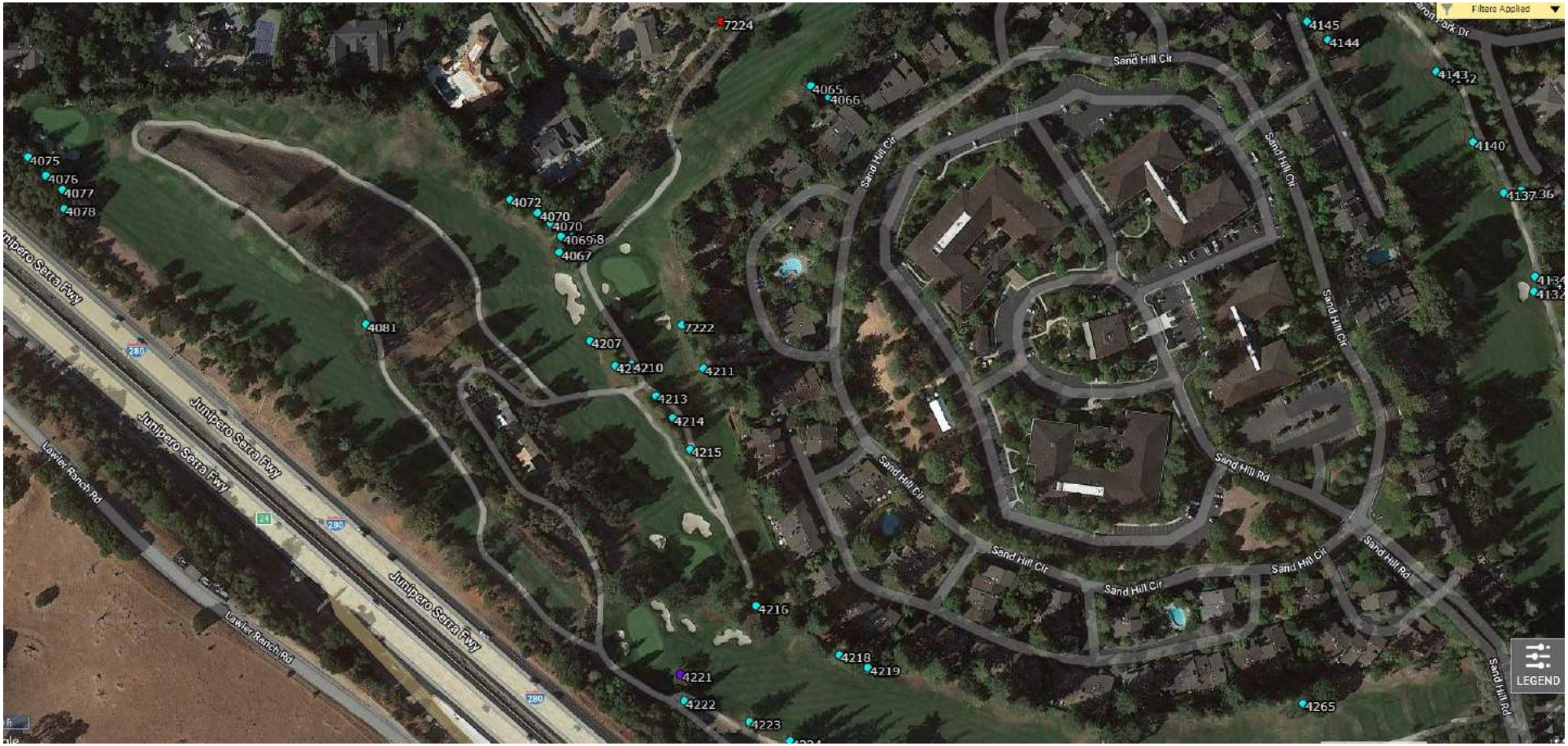
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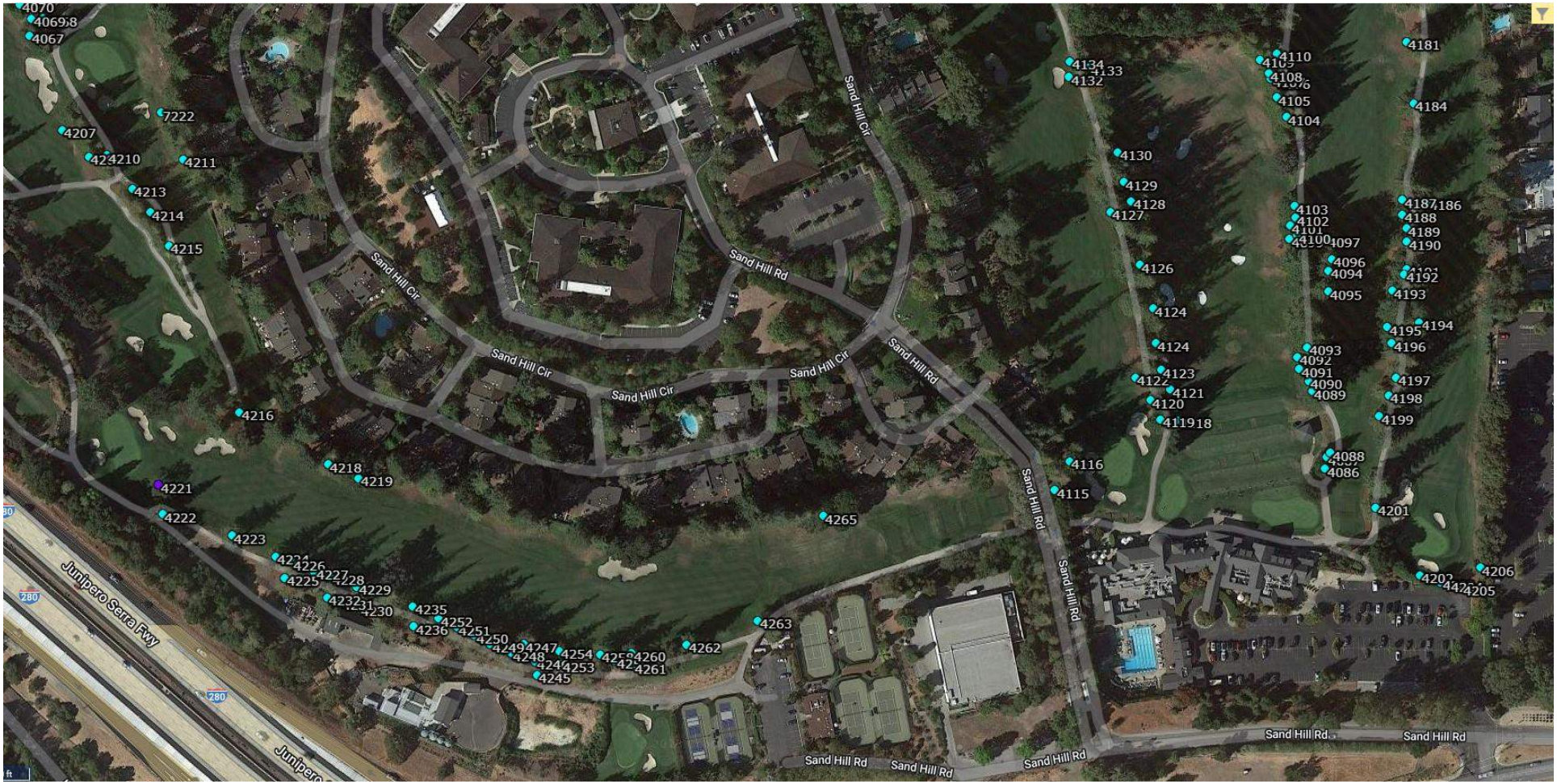
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Junipero Serra Fwy
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Sharon Heights Course Renovation Poor Condition and Worse
Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Diameter Mitiga-tion Calcu-lation	Reason for Removal
4024	Coast redwood	32	803.84	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,122.25	1,200	Tree health rating
4034	Blue Gum eucalyp	10.63	88.70	0.3	0.45	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$0.00	$0.00	0	undersized
4046	Coast redwood	14	153.86	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$0.00	$0.00	0	undersized
4049	Coast redwood	46	1661.06	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$2,319.03	5000	Tree health rating
4054	Coast redwood	7	38.47	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$0.00	$0.00	0	undersized
4073	Coast redwood	40	1256.00	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$66,800.69	$1,753.52	1200	Tree health rating
4074	Monterey pine	64	3215.36	0.1	0.45	0.35	4	2.46	4.75	Monterey pine	252.63	53.19	$171,009.77	$2,693.40	7000	Tree health rating
4079	Cypress	14	153.86	0.3	0.45	0.35	2	1.69	2.24	Cypress	252.63	112.78	$0.00	$0.00	0	undersized
4082	Blue Gum eucalyp	55	2374.63	0.3	0.45	0.35	4	2.56	4.75	Blue Gum eucalypt	252.63	53.19	$126,295.06	$5,967.44	7000	Tree health rating
4083	Blue Gum eucalyp	57	2550.47	0.3	0.45	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$135,647.15	$6,409.33	7000	Tree health rating
4084	Monterey pine	26	530.66	0.3	0.45	0.35	4	2.46	4.75	Monterey pine	252.63	53.19	$28,223.29	$1,333.55	400	Tree health rating
4085	Monterey pine	29	660.19	0	0.45	0.35	4	2.46	4.75	Monterey pine	252.63	53.19	$0.00	$0.00	0	Dead
4098	Coast redwood	21	346.19	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$18,411.94	$483.31	400	Tree health rating
4111	Coast redwood	25	490.63	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$684.97	400	Tree health rating
4117	Coast redwood	14	153.86	0	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$0.00	$0.00	0	undersized/Dead
4131	Coast redwood	37	1074.67	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$1,500.35	1200	Tree health rating
4135	Coast redwood	18	254.34	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$13,527.14	$355.09	200	Tree health rating
4139	Coast redwood	25	490.63	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$26,094.02	$684.97	400	Tree health rating
4147	Coast redwood	29	660.19	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$921.69	400	Tree health rating
4175	Coast redwood	24	452.16	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$24,048.25	$210.42	400	Tree health rating
4177	Coast redwood	37	1074.67	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$1,500.35	1200	Tree health rating
4182	Coast redwood	37	1074.67	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$1,500.35	1200	Tree health rating
4183	Coast redwood	26	530.66	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$740.86	400	Tree health rating
4208	Coast redwood	26	530.66	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$740.86	400	Tree health rating
4217	Coast redwood	46	1661.06	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$88,343.91	$2,319.03	5000	Tree health rating
4220	Lombardy poplar	11.75	108.38	0.3	0.45	0.35	4	2.46	4.75	Lombardy poplar	252.63	53.19	$0.00	$0.00	0	undersized
4234	Coast redwood	35	961.63	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$51,144.28	$1,342.54	1200	Tree health rating

Sharon Heights Course Renovation Poor Condition and Worse
Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Diameter Mitiga-tion Calcu-lation	Reason for Removal
4237	Coast redwood	28	615.44	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,732.34	$859.22	400	Tree health rating
4238	Coast redwood	32	803.84	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,752.44	$1,122.25	1200	Tree health rating
4239	Coast redwood	21	346.19	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$18,411.94	$161.10	400	Tree health rating
4240	Coast redwood	31	754.39	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,122.16	$351.07	1200	Tree health rating
4241	Coast redwood	29	660.19	0	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$0.00	$0.00	0	dead
4242	Coast redwood	30	706.50	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$37,575.39	$986.35	400	Tree health rating
4243	Coast redwood	36	1017.36	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$54,108.56	$473.45	1200	Tree health rating
4244	Coast redwood	32	803.84	0	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$0.00	$0.00	0	dead
4255	Coast redwood	26	530.66	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,223.29	$740.86	400	Tree health rating
4256	Coast redwood	29	660.19	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$35,112.11	$307.23	400	Tree health rating
4257	Coast redwood	38	1133.54	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$1,582.55	1200	Tree health rating
4266	Coast redwood	37	1074.67	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,156.34	$1,500.35	1200	Tree health rating
4264	Coast redwood	21.47	361.85	0.3	0.25	0.35	4	1.69	2.24	Coast redwood	252.63	112.78	$40,810.38	$1,071.27	200	Tree health rating
4301	Coast redwood	80.6	5099.64	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$271,225.83	$7,119.68	7000	Tree health rating
4307	Monterey cypress	14.2	158.29	0.1	0.45	0.35	2	1.69	2.24	Monterey cypress	252.63	112.78	$0.00	$0.00	0	undersized
4314	Monterey cypress	18.3	262.89	0.3	0.45	0.35	2	1.69	2.24	Monterey cypress	252.63	112.78	$29,648.91	$1,400.91	$200	Tree health rating
4319	Coast redwood	31.8	793.82	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$42,219.71	$369.42	1200	Tree health rating
4323	Coast redwood	34.1	912.81	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$48,547.82	$1,274.38	1200	Tree health rating
4325	Coast redwood	63.1	3125.56	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$166,233.94	$4,363.64	7000	Tree health rating
4326	Coast redwood	54.5	2331.65	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$124,009.22	$3,255.24	7000	Tree health rating
4327	Coast redwood	39	1193.99	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$63,502.41	$1,666.94	1200	Tree health rating
4334	Coast redwood	33.5	880.97	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$46,854.42	$1,229.93	1200	Tree health rating
4340	Coast redwood	45.8	1646.65	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$87,577.38	$2,298.91	5000	Tree health rating
4344	Monterey pine	31.2	764.15	0.3	0.45	0.35	4	2.46	4.75	Monterey pine	252.63	53.19	$40,641.54	$1,920.31	1200	Tree health rating
4347	Coast redwood	30.66	737.93	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$39,246.89	$1,030.23	1200	Tree health rating
4360	Coast redwood	24.8	482.81	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$25,678.19	$674.05	400	Tree health rating
4363	Coast redwood	49.2	1900.20	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$101,062.76	$2,652.90	5000	Tree health rating

Sharon Heights Course Renovation Poor Condition and Worse
Tree List

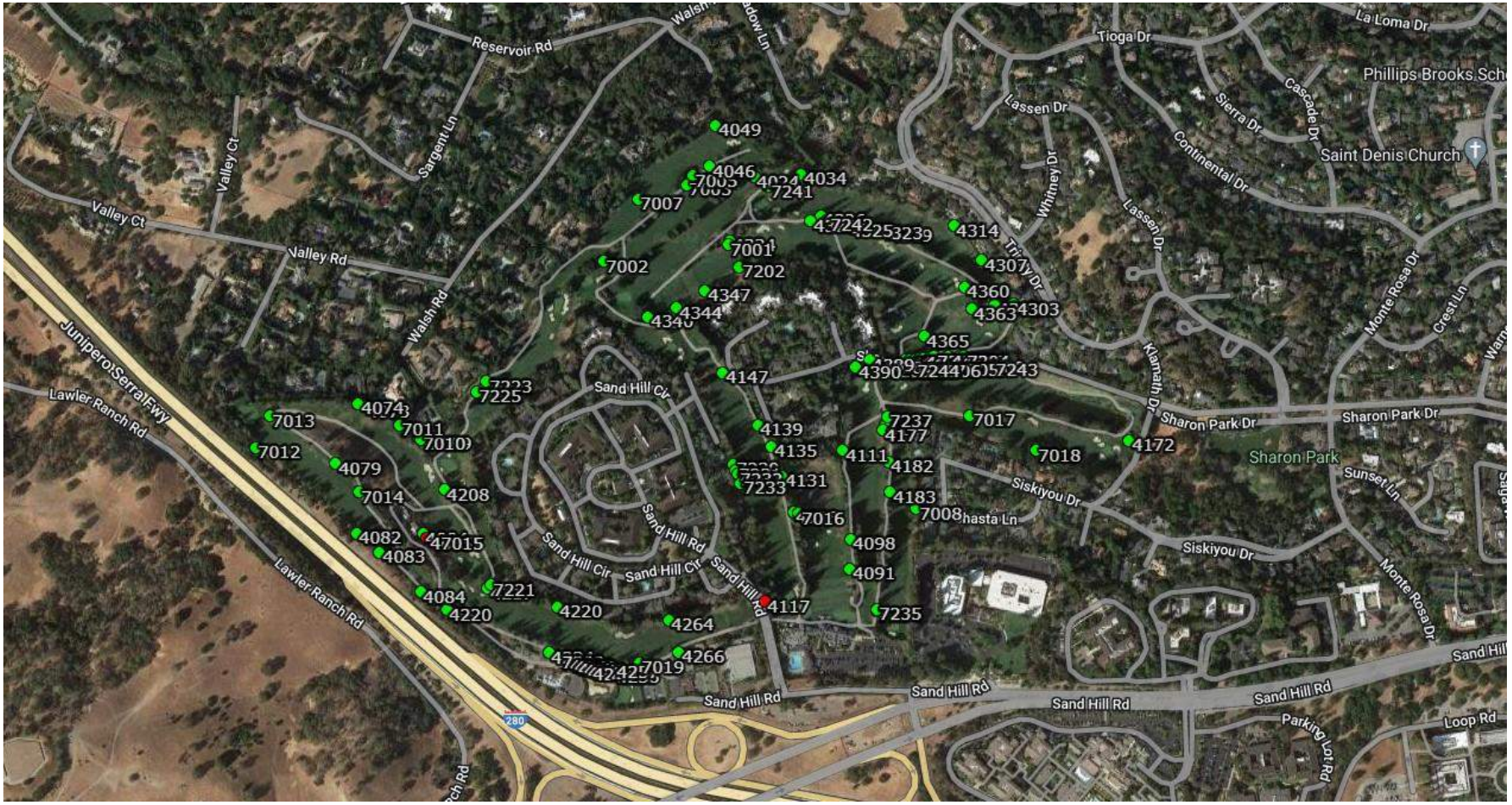
Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Diameter Mitiga-tion Calcu-lation	Reason for Removal
4365	Coast redwood	42	1384.74	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$73,647.76	$1,933.25	5000	Tree health rating
4368	Coast redwood	33	854.87	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$45,466.22	$1,193.49	1200	Tree health rating
4369	Coast redwood	32.8	844.53	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$44,916.78	$1,179.07	1200	Tree health rating
4370	Coast redwood	26.6	555.43	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$29,540.94	$775.45	400	Tree health rating
4371	Coast redwood	29.5	683.15	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$36,333.31	$953.75	400	Tree health rating
4372	Coast redwood	32.5	829.16	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$44,098.89	$1,157.60	1200	Tree health rating
4373	Coast redwood	46.2	1675.54	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$89,113.79	$2,339.24	5000	Tree health rating
4375	Coast redwood	19.2	289.38	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$15,390.88	$404.01	200	Tree health rating
4376	Coast redwood	23.1	418.88	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,278.45	$584.81	400	Tree health rating
4380	Coast redwood	42.3	1404.59	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$74,703.63	$1,960.97	5000	Tree health rating
4381	Coast redwood	39.6	1231.01	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$65,471.36	$1,718.62	1200	Tree health rating
4385	Coast redwood	9	63.59	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$0.00	$0.00	0	undersized
4386	Coast redwood	6.4	32.15	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$0.00	$0.00	0	undersized
4387	Coast redwood	30.5	730.25	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$38,838.34	$1,019.51	1200	Tree health rating
4388	Coast redwood	51.5	2082.02	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$110,732.58	$2,906.73	7000	Tree health rating
4389	Coast redwood	38	1133.54	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$60,287.62	$1,582.55	1200	Tree health rating
4390	Coast redwood	45.9	1653.85	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$87,960.23	$2,308.96	5000	Tree health rating
7001	Coast redwood	37.2	1086.31	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$57,775.92	$1,516.62	1200	Tree health rating
7008	Monterey Pine #9	20	314.00	0	0.25	0.35	4	2.46	4.75	Monterey Pine	252.63	53.19	$0.00	$0.00	0	dead
7009	Raywood ash	23	415.27	0.1	0.45	0.35	2	1.69	2.24	Raywood ash	252.63	112.78	$46,834.11	$737.64	400	Tree health rating
7010	Raywood ash	36	1017.36	0.1	0.45	0.35	2	1.69	2.24	Raywood ash	252.63	112.78	$114,739.13	$1,807.14	1200	Tree health rating
7016	Coast redwood	50	1962.50	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$104,376.08	$2,739.87	5000	Tree health rating
7203	Coast redwood	45.4	1618.01	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$86,054.32	$752.98	5000	Tree health rating
7204	Coast redwood	27.7	602.32	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$32,034.69	$280.30	1200	Tree health rating
7205	Coast redwood	27	572.27	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$30,436.06	$266.32	1200	Tree health rating
7206	Coast redwood	32.2	813.92	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$43,288.52	$1,136.32	1200	Tree health rating
7207	Coast redwood	27.4	589.35	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$31,344.55	$822.79	400	Tree health rating

Sharon Heights Course Renovation Poor Condition and Worse
Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replace-ment species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic repro-duction cost ($)	Depre-ciated repro-duction cost ($)	Diameter Mitiga-tion Calcu-lation	Reason for Removal
7208	Coast redwood	32.7	839.39	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$44,643.32	$390.63	5000	Tree health rating
7209	Coast redwood	23.2	422.52	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$22,471.75	$589.88	400	Tree health rating
7221	Coast redwood	35.7	1000.47	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$53,210.51	$1,396.78	1200	Tree health rating
7223	Blue Gum eucalyp	20.6	333.12	0.3	0.25	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$17,717.21	$465.08	400	Tree health rating
7225	Blue Gum eucalyp	22.6	400.95	0.25	0.25	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$21,324.45	$466.47	400	Tree health rating
7231	Blue Gum eucalyp	52	2122.64	0.3	0.25	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$112,893.17	$2,963.45	7000	Tree health rating
7233	Blue Gum eucalyp	25	490.63	0.3	0.25	0.35	4	2.46	4.75	Blue Gum eucalypt	252.63	53.19	$26,094.02	$684.97	400	Tree health rating
7234	Incense Cedar	16	200.96	0.3	0.25	0.35	3	2.20	3.80	Incense Cedar	252.63	66.48	$13,360.14	$350.70	200	Tree health rating
7235	Incense Cedar	14	153.86	0.3	0.25	0.35	3	2.20	3.80	Incense Cedar	252.63	66.48	$10,228.86	$0.00	0	undersized
7243	Coast redwood	31.3	769.06	0.3	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$40,902.48	$1,073.69	1200	Tree health rating
7292	Coast redwood	26.1	534.75	0.1	0.25	0.35	4	2.46	4.75	Coast redwood	252.63	53.19	$28,440.81	$248.86	400	
Total	92 trees in poor condition or worse. 72 Rewoods, 20 other species, No oaks; 78 poor condition protected trees to be removed, 14 undersized trees and dead trees not included in mitigation. Mitigation for protected trees in poor condition is calculated by replacement list trunk diameter equivalents; $0 mitigation is proposed for undersized. dead, and unprotected trees (14); A total of $154,800 is proposed for mitigation for these poor condition trees.													Total	$154,800	

color key	
65	poor condition protected Redwoods to be removed
13	Poor condition non-redwood trees to be removed
14	Dead - Undersized trees with no proposed mitigation

AERIAL IMAGES OF POOR CONDITION TREES IN APPROXIMATE LOCATIONS

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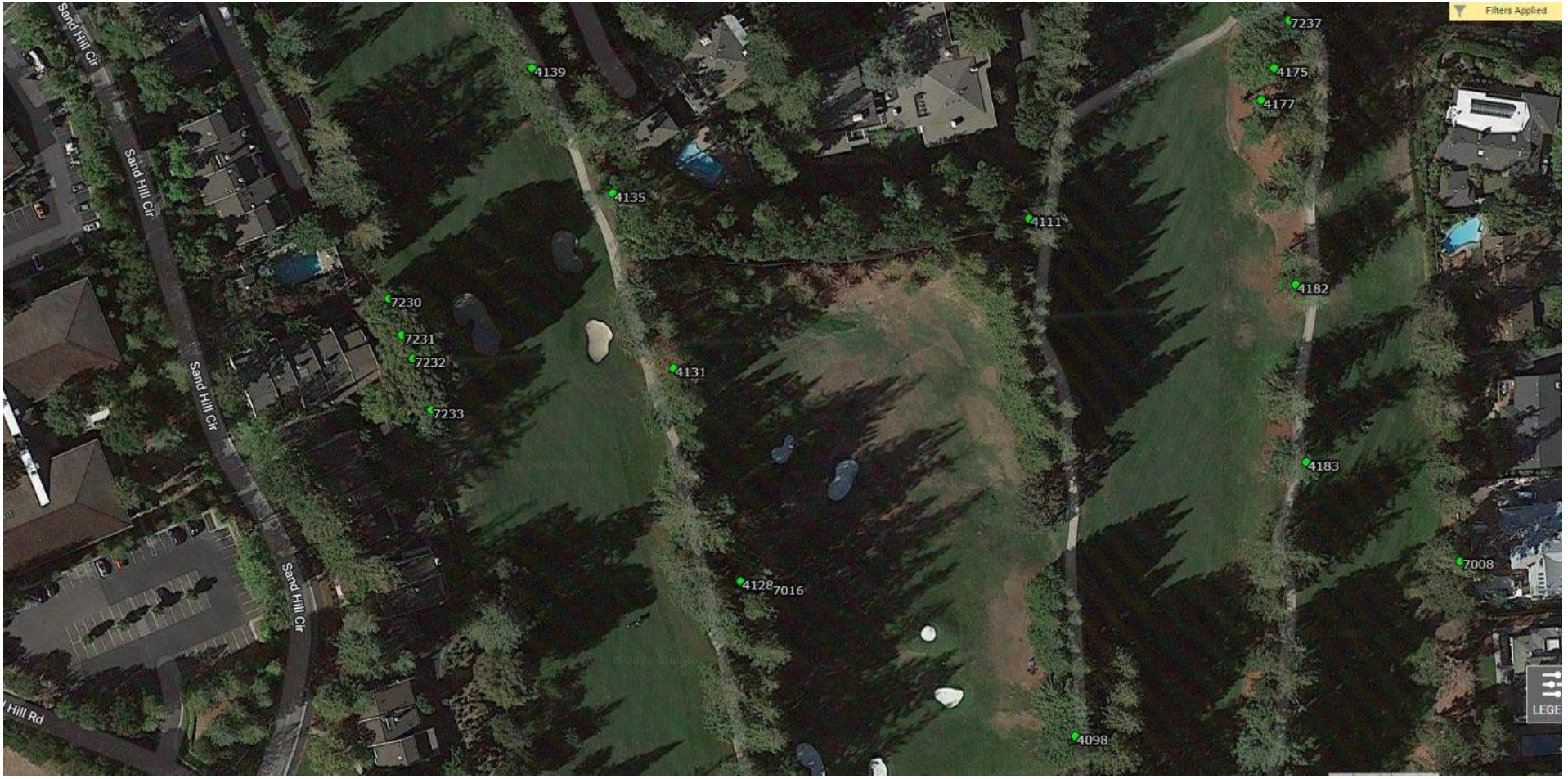
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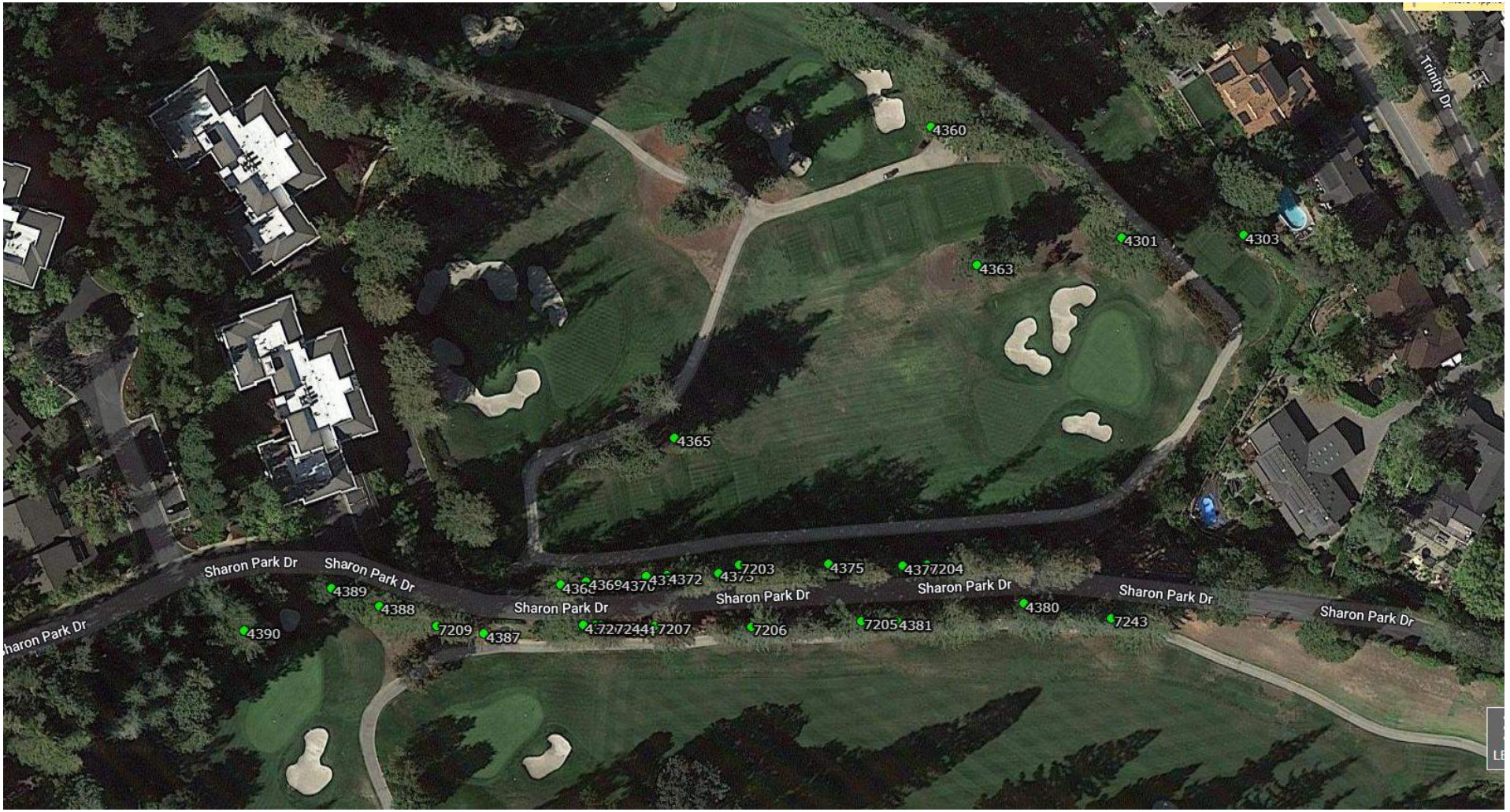
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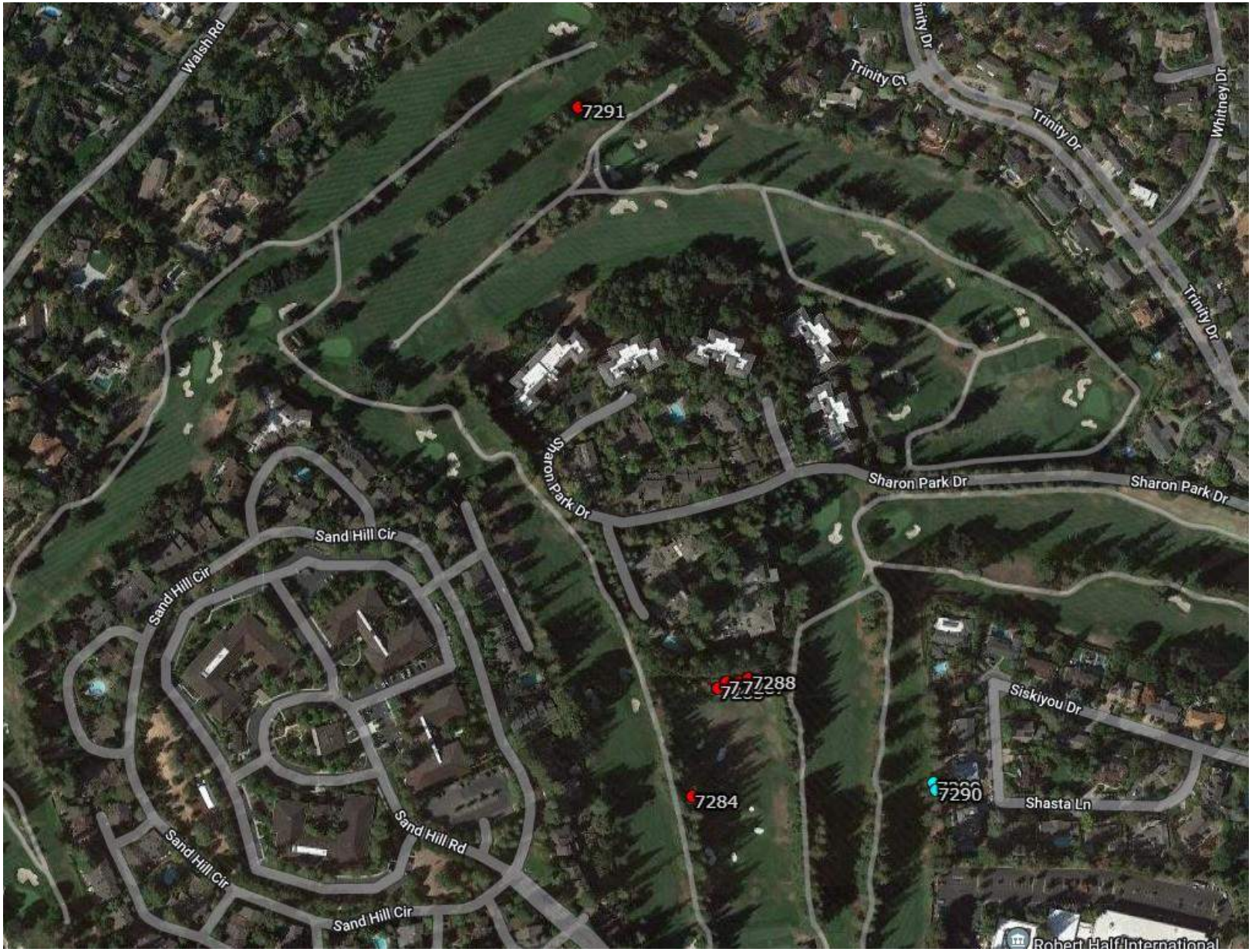
Sharon Heights Golf Course
Dead Tree List 1-3-23

Tree #	Common Name	Latin Name	Condition	DBH	Ht Dia Meas at (ft)	Crown Spread	Vigor	Observation Comments
7288	Coast Redwood	Sequoia sempervirens	Dead	19.1	4.5	0	Dying / Dead	Dead, all needles brown
7287	Coast Redwood	Sequoia sempervirens	Dying	14.8	4.5	11	Dying / Dead	Severe decline; Undersized
7286	Coast Redwood	Sequoia sempervirens	Dying	20.1	4.5	14	Dying / Dead	Severe decline
7285	Coast Redwood	Sequoia sempervirens	Dying	16.3	4.5	10	Dying / Dead	Severe decline, dying
7291	Coast Redwood	Sequoia sempervirens	Dying	33.3	4.5	22	Dying / Dead	Significant dieback lower and mid crown, end tree
7290	Monterey Pine	Pinus radiata	Dying	28.8	4.5	29	Dying / Dead	Bark beetles all around base, dying
7289	Monterey Pine	Pinus radiata	Dying	28	4.5	26	Dying / Dead	Bark beetles mostly brown needles
7284	Coast Redwood	Sequoia sempervirens	Dead	20.9	4.5	10	Dying / Dead	Severe decline, dying top, dieback
8 trees dead and dying found during 1-3-23 site visit; remove based on condition								

AERIAL IMAGES OF FAIR AND BETTER CONDITION TREES IN APPROXIMATE LOCATIONS

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APPENDIX 3 –TREE LIST

The trees on this list are the initial inventory of the trees before all the sorting and removal decisions were made. The list is in numeric order by tree number.

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4001	Coast Redwood Sequoia sempervirens	Sequoia	25	4.5	16	Fair	
4002	Coast Redwood Sequoia sempervirens	Sequoia	15	4.5	14	Fair	
4003	Coast Redwood Sequoia sempervirens	Sequoia	15	4.5	12	Fair	
4004	Coast Redwood Sequoia sempervirens	Sequoia	20	4.5	15	Fair	
4005	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	24	Fair	
4006	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	28	Fair	
4007	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	17	Fair	
4008	Coast Redwood Sequoia sempervirens	Sequoia	67	4.5	30	Fair	
4009	Coast Redwood Sequoia sempervirens	Sequoia	49	4.5	32	Fair	
4010	Coast Redwood Sequoia sempervirens	Sequoia	34	4.5	19	Fair	
4011	Coast Redwood Sequoia sempervirens	Sequoia	47	4.5	20	Fair	
4012	Coast Redwood Sequoia sempervirens	Sequoia	45	4.5	23	Fair	
4013	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	23	Fair	
4014	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	23	Fair	
4015	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	17	Fair	
4016	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	17	Fair	
4017	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	14	Fair	
4018	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	19	Fair	
4019	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	21	Fair	
4020	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	23	Fair	
4021	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	20	Fair	

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4022	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	23	Fair	
4023	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	28	Fair	
4025	Coast Redwood Sequoia sempervirens	Sequoia	30	4.5	21	Fair	
4026	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	19	Fair	
4027	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	12	Fair	
4028	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	23	Fair	
4029	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	21	Fair	
4030	Coast Redwood Sequoia sempervirens	Sequoia	30	4.5	22	Fair	
4031	Coast Redwood Sequoia sempervirens	Sequoia	48	4.5	30	Fair	
4032	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	20	Fair	
4033	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	17	Fair	
4034	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	10.63	4.5	15	Poor	undersized
4036	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	16	Fair	
4037	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	25	Fair	
4038	Coast Redwood Sequoia sempervirens	Sequoia	47	4.5	22	Fair	
4039	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	31	Fair	
4040	Coast Redwood Sequoia sempervirens	Sequoia	31	4.5	17	Fair	
4041	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	23	Fair	
4042	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	14	Fair	
4043	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	17	Fair	
4044	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	27	Fair	

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4045	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	24	Fair	
4046	Coast Redwood Sequoia sempervirens	Sequoia	14	4.5	11	Poor	undersized
4047	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	23	Fair	
4048	Coast Redwood Sequoia sempervirens	Sequoia	14	4.5	12	Fair	
4049	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	24	Poor	Codom at 80'
4050	Coast Redwood Sequoia sempervirens	Sequoia	21	4.5	16	Fair	
4051	Coast Redwood Sequoia sempervirens	Sequoia	48	4.5	24	Fair	
4052	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	22	Fair	
4053	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5		Fair	
4054	Coast Redwood Sequoia sempervirens	Sequoia	7	4.5	8	Fair	
4055	Coast Redwood Sequoia sempervirens	Sequoia	5	4.5	5	Fair	
4056	Coast Redwood Sequoia sempervirens	Sequoia	4	4.5	4	Fair	
4058	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	22	Fair	Codom at 84'.
4059	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	26	Fair	
4060	Coast Redwood Sequoia sempervirens	Sequoia	41	4.5	28	Fair	
4061	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	14	Fair	
4062	Coast Redwood Sequoia sempervirens	Sequoia	30	4.5	7	Fair	
4063	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	17	Fair	
4064	Coast Redwood Sequoia sempervirens	Sequoia	50	4.5	24	Fair	
4065	Coast Redwood Sequoia sempervirens	Sequoia	49	4.5	28	Fair	Codominant leader at 80 feet above grade.
4066	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	27	Fair	

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4067	Coast Redwood Sequoia sempervirens	Sequoia	22	4.5	14	Fair	
4068	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	23	Fair	
4069	Coast Redwood Sequoia sempervirens	Sequoia	23	4.5	23	Fair	
4070	Coast Redwood Sequoia sempervirens	Sequoia	20	4.5	12	Fair	
4070	Coast Redwood Sequoia sempervirens	Sequoia	21	4.5	16	Fair	
4072	Coast Redwood Sequoia sempervirens	Sequoia	22	4.5	12	Fair	
4073	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	26	Poor	Very sparse foliage numerous lateral branches missing
4074	Monterey pine Pinus radiata	Pinus	64	1.5	33	Poor	Large basil Cavity south side grade 25 feet above point of a codominant stem failure of an old codominant stem failure sometime in the distant past the base has significant Decay throughout OK decay throughout the entire base the tree leans east as weak attachments with severe inclusions in the upper canopy tree should be removed as soon as possible
4075	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	21	Fair	
4076	Coast Redwood Sequoia sempervirens	Sequoia	42	4.5	24	Fair	
4077	Coast Redwood Sequoia sempervirens	Sequoia	23	4.5	17	Fair	
4078	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	17	Fair	
4079	Cypress Cupressus species	Cupressus	14	4.5	10	Poor	undersized
4081	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	19	Fair	

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4082	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	55	4.5	19	Poor	Eucalyptus species not blue gum forks 2 feet above grade into multiple stems all weak attachments.
4082	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	48	4.5	21	Poor	Check status
4083	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	57	1	28	Poor	eucalyptus species not glue gum forks 3 feet above grade weak crotch in multiple stems weak attachments, dead branches throughout.
4084	Monterey pine Pinus radiata	Pinus	26	4.5	30	Poor	
4085	Monterey pine Pinus radiata	Pinus	29	4.5	23	Dead	
4086	Coast Redwood Sequoia sempervirens	Sequoia	18	4.5	13	Fair	
4087	Coast Redwood Sequoia sempervirens	Sequoia	17	4.5	14	Fair	
4088	Coast Redwood Sequoia sempervirens	Sequoia	18	4.5	16	Fair	
4089	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	24	Fair	
4090	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	25	Fair	
4091	Coast Redwood Sequoia sempervirens	Sequoia	47	4.5	24	Poor	Trunk wound approximately 70 feet above grade possible codominant stem
4092	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	18	Fair	
4093	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	21	Fair	
4094	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	28	Fair	
4096	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	21	Fair	
4097	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	16	Fair	
4098	Coast Redwood Sequoia sempervirens	Sequoia	21	4.5	8	Poor	The trees in the center of the growth suppressed very few lateral branches on the larger stem.

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4099	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	19	Fair	
4100	Coast Redwood Sequoia sempervirens	Sequoia	23	4.5	13	Fair	
4101	Coast Redwood Sequoia sempervirens	Sequoia	25	4.5	14	Fair	
4102	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	16	Fair	
4103	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	17	Fair	
4104	Coast Redwood Sequoia sempervirens	Sequoia	23	4.5	14	Fair	
4105	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	15	Fair	
4106	Coast Redwood Sequoia sempervirens	Sequoia	20	4.5	15	Fair	
4107	Coast Redwood Sequoia sempervirens	Sequoia	22	4.5	15	Fair	
4108	Coast Redwood Sequoia sempervirens	Sequoia	16	4.5	11	Fair	
4109	Coast Redwood Sequoia sempervirens	Sequoia	21	4.5	12	Fair	
4110	Coast Redwood Sequoia sempervirens	Sequoia	18	4.5	14	Fair	
4111	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	17	Fair	
4111	Coast Redwood Sequoia sempervirens	Sequoia	25	1	12	Poor	Call dominant forks at foot above braid lacking lateral branches
4113	Coast Redwood Sequoia sempervirens	Sequoia	31	4.5	18	Fair	
4114	Coast Redwood Sequoia sempervirens	Sequoia	49	4.5	18	Fair	
4115	Coast Redwood Sequoia sempervirens	Sequoia	45	4.5	23	Fair	
4116	Coast Redwood Sequoia sempervirens	Sequoia	31	4.5	23	Fair	
4117	Coast Redwood Sequoia sempervirens	Sequoia	14	4.5	0	Dead	
4118	Coast Redwood Sequoia sempervirens	Sequoia	18	4.5	11	Fair	
4119	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	17	Fair	

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4120	Coast Redwood Sequoia sempervirens	Sequoia	18	4.5	14	Fair	
4121	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	18	Fair	
4122	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	18	Fair	
4123	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	23	Fair	
4124	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	24	Fair	
4124	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	22	Fair	
4126	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	23	Fair	
4127	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	24	Fair	
4128	Coast Redwood Sequoia sempervirens	Sequoia	25	4.5	10	Poor	The top 18 feet of the tree are dead.
4129	Coast Redwood Sequoia sempervirens	Sequoia	34	4.5	24	Fair	
4130	Coast Redwood Sequoia sempervirens	Sequoia	13	4.5	13	Fair	Undersized
4131	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	18	Poor	significant die back throughout the entire canopy
4132	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	20	Fair	
4133	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	18	Fair	
4134	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	24	Fair	
4135	Coast Redwood Sequoia sempervirens	Sequoia	18	4.5	20.1	Poor	
4136	Coast Redwood Sequoia sempervirens	Sequoia	18	4.5	12	Fair	
4137	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	24	Fair	
4140	Coast Redwood Sequoia sempervirens	Sequoia	30	4.5	24	Fair	
4142	Coast Redwood Sequoia sempervirens	Sequoia	20	4.5	12	Fair	
4143	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	15	Fair	

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4144	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	18	Fair	
4145	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	20	Fair	
4146	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	22	Fair	
4147	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	10	Poor	
4148	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	18	Fair	
4149	Coast Redwood Sequoia sempervirens	Sequoia	25	4.5	16	Fair	
4151	Coast Redwood Sequoia sempervirens	Sequoia	22	4.5	12	Fair	
4152	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	16	Fair	
4153	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	17	Fair	
4154	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	17	Fair	
4155	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	17	Fair	
4156	Coast Redwood Sequoia sempervirens	Sequoia	63	4.5	28	Fair	
4157	Coast Redwood Sequoia sempervirens	Sequoia	55	4.5	24	Fair	
4159	Coast Redwood Sequoia sempervirens	Sequoia	41	4.5	25	Fair	
4160	Coast Redwood Sequoia sempervirens	Sequoia	39	4.5	15	Fair	
4162	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	24	Fair	
4163	Coast Redwood Sequoia sempervirens	Sequoia	45	4.5	27	Fair	
4165	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	25	Fair	
4166	Coast Redwood Sequoia sempervirens	Sequoia	39	4.5	24	Fair	
4167	Coast Redwood Sequoia sempervirens	Sequoia	39	4.5	23	Fair	
4168	Coast Redwood Sequoia sempervirens	Sequoia	50	4.5	25	Fair	

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4169	Coast Redwood Sequoia sempervirens	Sequoia	41	4.5	17	Fair	
4170	Coast Redwood Sequoia sempervirens	Sequoia	39	4.5	20	Fair	
4171	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	22	Fair	
4172	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	16	Poor	. Three forks in the codominant stems ~ 60 feet above grade
4173	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	10	Fair	
4175	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	8	Poor	I Trees Central in Grove is 85% dead.
4176	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	24	Fair	
4177	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	12	Poor	-3/2 codominant sprouts 60 feet above grade with mainstem damaging that location.
4178	Coast Redwood Sequoia sempervirens	Sequoia	23	4.5	22	Fair	
4180	Coast Redwood Sequoia sempervirens	Sequoia	51	4.5	25	Fair	
4181	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	26	Fair	
4182	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	14	Poor	Very thin foliage particularly in the pot top half
4183	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	17	Poor	
4184	Coast Redwood Sequoia sempervirens	Sequoia	51	4.5	24	Fair	
4185	Coast Redwood Sequoia sempervirens	Sequoia	56	4.5	28	Fair	
4186	Coast Redwood Sequoia sempervirens	Sequoia	42	4.5	17	Fair	
4188	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	15	Fair	
4189	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	18	Fair	
4190	Coast Redwood Sequoia sempervirens	Sequoia	31	4.5	14	Fair	

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4191	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	24	Fair	
4192	Coast Redwood Sequoia sempervirens	Sequoia	41	4.5	24	Fair	
4193	Coast Redwood Sequoia sempervirens	Sequoia	51	4.5	26	Fair	
4194	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	24	Fair	
4195	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	24	Fair	
4196	Coast Redwood Sequoia sempervirens	Sequoia	45	4.5	26	Fair	
4197	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	23	Fair	
4198	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	24	Fair	
4199	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	27	Fair	
4201	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	27	Fair	
4202	Coast Redwood Sequoia sempervirens	Sequoia	12	4.5	8	Fair	
4203	Coast Redwood Sequoia sempervirens	Sequoia	19	4.5	10	Fair	
4204	Coast Redwood Sequoia sempervirens	Sequoia	14	4.5	12	Fair	
4205	Coast Redwood Sequoia sempervirens	Sequoia	13	4.5	11	Fair	
4206	Coast Redwood Sequoia sempervirens	Sequoia	30	4.5	24	Fair	
4207	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	16	Fair	
4208	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	16	Poor	Tree has a codominant leader
4209	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	16	Fair	
4210	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	16	Fair	
4211	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	20	Fair	
4213	Coast Redwood Sequoia sempervirens	Sequoia	16	4.5	10	Fair	

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4214	Coast Redwood Sequoia sempervirens	Sequoia	25	4.5	14	Fair	
4215	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	14	Fair	
4216	Coast Redwood Sequoia sempervirens	Sequoia	34	4.5	18	Fair	
4217	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	27	Poor	Codominant at 24 feet, Broken top
4218	Coast Redwood Sequoia sempervirens	Sequoia	42	4.5	20	Fair	
4219	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	18	Fair	
4220	Lombardy poplar Populus italica 'nigra'		11.75	4.5	8	Poor	Undersized
4222	Coast Redwood Sequoia sempervirens	Sequoia	25	4.5	16	Fair	
4223	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	16	Fair	
4224	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	18	Fair	
4225	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	8	Fair	
4226	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	20	Fair	
4227	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	19	Fair	
4228	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	17	Fair	
4229	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	25	Fair	
4230	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	8	Fair	
4231	Coast Redwood Sequoia sempervirens	Sequoia	22	4.5	8	Fair	
4232	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	10	Fair	
4233	Coast Redwood Sequoia sempervirens	Sequoia	20	4.5	14	Fair	
4234	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	16	Poor	
4235	Coast Redwood Sequoia sempervirens	Sequoia	35	4.5	15	Fair	

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4236	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	14	Fair	
4237	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	6	Fair	
4238	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	9	Poor	Tree forks in the codon is 6 feet above grade top 20 feet dead
4239	Coast Redwood Sequoia sempervirens	Sequoia	21	4.5	5	Poor	-Broke top at 30
4240	Coast Redwood Sequoia sempervirens	Sequoia	31	4.5	16	Poor	Broke top at 24 feet
4241	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	8	Dead	
4242	Coast Redwood Sequoia sempervirens	Sequoia	30	4.5	16	Poor	
4243	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	12	Poor	. Branch day back throughout
4244	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	6	Dead	
4245	Coast Redwood Sequoia sempervirens	Sequoia	25	4.5	14	Fair	
4246	Coast Redwood Sequoia sempervirens	Sequoia	31	4.5	15	Fair	
4247	Coast Redwood Sequoia sempervirens	Sequoia	42	4.5	14	Fair	
4248	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	18	Fair	
4249	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	16	Fair	
4250	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	15	Fair	
4251	Coast Redwood Sequoia sempervirens	Sequoia	49	4.5	17	Fair	
4252	Coast Redwood Sequoia sempervirens	Sequoia	48	4.5	19	Fair	
4253	Coast Redwood Sequoia sempervirens	Sequoia	20	4.5	14	Fair	
4254	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	8	Fair	
4255	Coast Redwood Sequoia sempervirens	Sequoia	26	4.5	15	Poor	
4256	Coast Redwood Sequoia sempervirens	Sequoia	29	4.5	8	Poor	codoms in 16 feet above grade dead

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4257	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	10	Poor	Dead top 12 feet minimum
4258	Coast Redwood Sequoia sempervirens	Sequoia	34	4.5	12	Fair	
4259	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	10	Fair	
4260	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	12	Fair	
4261	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	12	Fair	
4262	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	14	Fair	
4263	Coast Redwood Sequoia sempervirens	Sequoia	40	4.5	13	Fair	
4264	Coast Redwood Sequoia sempervirens	Sequoia	41	4.5	18	Poor	Basil crook to 4 feet
4265	Coast Redwood Sequoia sempervirens	Sequoia	58	4.5	12	Fair	
4266	Coast Redwood Sequoia sempervirens	Sequoia	37	4.5	10	Poor	
4301	Coast Redwood Sequoia sempervirens	Sequoia	80.6	4.5	40	Poor	Co dom leaders at 6', included bark 3', long branches, end weights
4302	Coast Redwood Sequoia sempervirens	Sequoia	39	4.5	27	Good	Straight trunk swollen flare
4304	Coast Redwood Sequoia sempervirens	Sequoia	23.3	23.4	16	Good	Straight stem, slight bend, normal flare
4305	Coast Redwood Sequoia sempervirens	Sequoia	41.7	4.5	24	Good	Normal flare, straight trunk
4306	Coast Redwood Sequoia sempervirens	Sequoia	31.6	4.5	24	Fair	Normal flare, bends in trunk,
4307	Monterey cypress Cupressus macrocarpa	Cupressus	14.2	4.5	10	Poor	undersized; Girdling stake cable at 5', self correcting bend S, low branches
4308	Coast Redwood Sequoia sempervirens	Sequoia	32.5	4.5	30	Fair	Buttressing flare, sinus E, shorter and wider
4309	Coast Redwood Sequoia sempervirens	Sequoia	26.6	4.5	18	Fair	Elliptical trunk, taller narrow, swollen SE flare
4310	Coast Redwood Sequoia sempervirens	Sequoia	29.3	4.5	21	Fair	Swollen flare, co dom at 50',
4311	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	20	Good	Swollen flare 2' from cart path, slight bend at 30',

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Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4312	Coast Redwood Sequoia sempervirens	Sequoia	49.6	4.5	32	Good	Normal flare, straight trunk, long branches
4313	Coast Redwood Sequoia sempervirens	Sequoia	43.3	4.5	32	Fair	Normal flare, 18" from cartpath, raising path, SGR N, straight trunk,
4314	Monterey cypress Cupressus macrocarpa	Cupressus	18.3	4.5	15	Poor	Swollen flare, heavy surface roots bend in trunk, likely bark beetles, bleeding on trunk,
4315	Coast Redwood Sequoia sempervirens	Sequoia	36.3	4.5	26	Fair	Normal flare, Sinus E, moderate crown density
4316	Coast Redwood Sequoia sempervirens	Sequoia	23.5	4.5	20	Fair	Normal flare, adventitious roots E, surface root W,
4317	Coast Redwood Sequoia sempervirens	Sequoia	34	4.5	17	Fair	Swollen flare N with knob, crown mostly N, lower down on S side void, 1' from cart path
4318	Coast Redwood Sequoia sempervirens	Sequoia	22.3	4.5	12	Good	Wide flare N&S, straight trunk minor bends,
4319	Coast Redwood Sequoia sempervirens	Sequoia	31.8	4.5	19	Poor	Old tag 46, normal flare, bark separating N & S 1-5', top broke out ~50',
4320	Coast Redwood Sequoia sempervirens	Sequoia	31.7	4.5	18	Fair	Normal flare, loose bark at base, straight trunk
4321	Coast Redwood Sequoia sempervirens	Sequoia	34.6	4.5	20	Fair	Normal flare, 1-sided lower crown N, moderate crown density
4322	Coast Redwood Sequoia sempervirens	Sequoia	41	4.5	39	Fair	Old tag 50, buttressing flare W, moderate crown density, minor bends in trunk
4323	Coast Redwood Sequoia sempervirens	Sequoia	34.1	4.5	27	Poor	Normal flare, symmetric, good crown density
4324	Coast Redwood Sequoia sempervirens	Sequoia	30.8	4.5		Good	Normal flare, straight trunk,
4325	Coast Redwood Sequoia sempervirens	Sequoia	63.1	4.5	31	Poor	Normal flare, co dominant leaders at 10', included bark 5', loose bark at base N&W
4326	Coast Redwood Sequoia sempervirens	Sequoia	54.5	4.5	25	Poor	Swollen flare, co dom at 25' included bark 4',
4328	Coast Redwood Sequoia sempervirens	Sequoia	34.6	4.5	21	Good	Normal flare, good crown density

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4329	Coast Redwood Sequoia sempervirens	Sequoia	19.6	4.5	20	Fair	Narrow flare, 18" from cart path, swollen trunk at 5', straight trunk, good crown density
4330	Coast Redwood Sequoia sempervirens	Sequoia	35.4	4.5	25	Fair	Buttressing flare, vertical laterals at 60'
4331	Coast Redwood Sequoia sempervirens	Sequoia	50.3	4.5	35	Good	Normal flare, good crown density
4332	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	30	Good	Normal flare, straight trunk, good crown density
4333	Coast Redwood Sequoia sempervirens	Sequoia	28	4.5	27	Good	Buttressing flare, straight trunk, small dead branches
4334	Coast Redwood Sequoia sempervirens	Sequoia	333.5	4.5	26	Poor	Normal flare, heavy basal sprouting, heavy dieback on upper branches
4335	Coast Redwood Sequoia sempervirens	Sequoia	23.4	4.5	16	Fair	Elliptical trunk and flare, small dead branches, sprouts around base
4336	Coast Redwood Sequoia sempervirens	Sequoia	41.8	4.5	36	Fair	Normal flare, bends in trunk 8-20', surface root NE, good crown density
4337	Coast Redwood Sequoia sempervirens	Sequoia	33.2	4.5	27	Fair	Narrow flare, sprouts at base, surface roots E&S, bends in trunk 5-20',
4338	Coast Redwood Sequoia sempervirens	Sequoia	11.1	4.5	13	Good	Undersized; Normal flare, straight trunk
4339	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	24	Good	Normal flare, straight trunk, some sprouts at base
4340	Coast Redwood Sequoia sempervirens	Sequoia	45.8	4.5	24	Poor	Normal flare, sprouts cut off at S&E flare, swollen trunk at 5', co dom at 40'
4341	Coast Redwood Sequoia sempervirens	Sequoia	39.4	4.5	32	Fair	Buttressing flare, swollen trunk at 30,40,50', low crown density
4342	Canary Island Pine Pinus canariensis		28.9	4.5	24	Fair	Normal flare, straight trunk, long laterals
4343	Coast Redwood Sequoia sempervirens	Sequoia	49.5	4.5	34	Fair	Normal flare, SGR S, good crown density,

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4344	Monterey pine Pinus radiata	Pinus	31.2	4.5	28	Poor	Buttressing flare, surface roots S, pitch canker on branch tips, lean W co dominant leaders at 25', small dead branches, long laterals
4345	Coast Redwood Sequoia sempervirens	Sequoia	40.5	4.5	28	Excellent	Normal flare, low branches to ground, growing in ivy, good crown density
4346	Coast Redwood Sequoia sempervirens	Sequoia	27	4.5	20	Excellent	Normal flare, low branches to ground, good crown density, growing in ivy,
4347	Coast Redwood Sequoia sempervirens	Sequoia	30.66	4.5	24	Poor	3 stems at base, stems touching, growing against each other, 1-sided crown mostly N
4348	Coast Redwood Sequoia sempervirens	Sequoia	31.2	4.5	24	Good	Normal flare, sinus S, moderate crown density
4349	Coast Redwood Sequoia sempervirens	Sequoia	29.6	4.5	24	Fair	Normal flare, seam up trunk S side 0-15',
4350	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	21	Fair	Old tag 54, swollen flare W, heavy sprouts, self correcting lean N, moderate crown density
4351	Coast Redwood Sequoia sempervirens	Sequoia	52.9	4.5	39	Excellent	Normal flare, straight trunk, good crown density
4352	Coast Redwood Sequoia sempervirens	Sequoia	47.2	4.5	33	Good	Sinuses in flare, straight trunk, good crown density
4353	Coast Redwood Sequoia sempervirens	Sequoia	40.4	4.5	27	Excellent	Buttressing flare,elliptical trunk, straight trunk, good crown density
4354	Coast Redwood Sequoia sempervirens	Sequoia	54.7	4.5	30	Excellent	Normal flare, straight trunk, good crown density
4355	Coast Redwood Sequoia sempervirens	Sequoia	43.5	4.5	25	Excellent	Buttressing flare, straight trunk, good crown density
4356	Coast Redwood Sequoia sempervirens	Sequoia	30.2	4.5	28	Fair	Normal flare, moderate crown density, straight trunk
4357	Coast Redwood Sequoia sempervirens	Sequoia	43.1	4.5	33	Good	Buttressing flare, straight trunk, good crown density
4359	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	24	Fair	Buttressing flare, slight bends in trunk, competing upper W lateral

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4360	Coast Redwood Sequoia sempervirens	Sequoia	24.8	4.5	25	Poor	Normal flare, broken & dead top leader, small dead branches
4361	Coast Redwood Sequoia sempervirens	Sequoia	37.7	4.5	27	Excellent	Normal flare, straight trunk, good crown density
4362	Coast Redwood Sequoia sempervirens	Sequoia	45.2	4.5	27	Fair	Buttressing flare, broken S branches 20-30', good crown density
4363	Coast Redwood Sequoia sempervirens	Sequoia	49.2	4.5	25	Poor	Sinuses in flare S,W,N,E, swollen trunk at 10', broken branches S 20-30', moderate crown density, self correcting bow in trunk at 15-20'
4364	Coast Redwood Sequoia sempervirens	Sequoia	46	4.5	28	Fair	Old tag 38, swollen flare, loose bark, good crown density, thin upper branches
4365	Coast Redwood Sequoia sempervirens	Sequoia	42	4.5	22	Poor	Old tag 37, Buttressing flare, broken top at 50'
4366	Coast Redwood Sequoia sempervirens	Sequoia	60.3	4.5	27	Fair	Normal flare, compact top, good crown density
4367	Coast Redwood Sequoia sempervirens	Sequoia	53	4.5		Fair	
4368	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	30	Poor	Normal flare, moderate crown density, co dom leaders at 50'
4369	Coast Redwood Sequoia sempervirens	Sequoia	32.8	4.5	20	Poor	Normal flare, thinnin foliage, branch dieback to top
4370	Coast Redwood Sequoia sempervirens	Sequoia	26.6	4.5	20	Poor	Slightly buried flare, dieback throughout crown
4371	Coast Redwood Sequoia sempervirens	Sequoia	29.5	4.5	18	Poor	Swollen flare, severe dieback entire crown
4372	Coast Redwood Sequoia sempervirens	Sequoia	32.5	4.5	27	Poor	Normal flare, co dom at 10', severe branch dieback upper crown
4373	Coast Redwood Sequoia sempervirens	Sequoia	46.2	4.5	25	Poor	Swollen flare, medium dieback of branches,
4374	Coast Redwood Sequoia sempervirens	Sequoia	42.5	4.5	27	Fair	Buttressing flare, small dead branches, moderate crown density,

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
4375	Coast Redwood Sequoia sempervirens	Sequoia	19.2	4.5	15	Poor	Slightly buried flare, crooks in trunk, dead top, small branch dieback
4376	Coast Redwood Sequoia sempervirens	Sequoia	23.1	4.5	21	Poor	Swollen flare, vertical and co dom branches dying back
4377	Coast Redwood Sequoia sempervirens	Sequoia	34.1	4.5	28	Fair	Normal flare, thinner top
4378	Coast Redwood Sequoia sempervirens	Sequoia	43	4.5	33	Good	Normal flare, small dead branches, straight trunk
4380	Coast Redwood Sequoia sempervirens	Sequoia	42.3	4.5	28	Poor	Normal flare, 3 co dom at 12' & 20,
4383	Coast Redwood Sequoia sempervirens	Sequoia	31.4	4.5	21	Good	Buttressing flare, straight trunk, good crown density
4385	Coast Redwood Sequoia sempervirens	Sequoia	9	4.5	5	Poor	Undersized; Normal flare, cable girdling trunk 7'
4386	Coast Redwood Sequoia sempervirens	Sequoia	6.4	4.5	8	Poor	Undersized; Young tree, browning foliage throughout
4387	Coast Redwood Sequoia sempervirens	Sequoia	30.5	4.5	15	Poor	Entire crown dead except 5% foliage scattered on branches
4388	Coast Redwood Sequoia sempervirens	Sequoia	51.5	4.5	30	Poor	Swollen flare, leans W, not quite self correcting, moderate crown density
4389	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	25	Poor	Swollen flare, self correcting lean W, sinuses W, sprouts E, dead branches mid crown S
4390	Coast Redwood Sequoia sempervirens	Sequoia	45.9	4.5	34	Poor	Wide flare, slight lean self correcting W, good crown density
4391	Coast Redwood Sequoia sempervirens	Sequoia	51.5	4.5	34	Fair	Wide flare, straight trunk good crown density
7001	Coast Redwood Sequoia sempervirens	Sequoia	37.2	4.5	20	Poor	Swollen flare with burls, basal sprouting Knobbing along trunk, heavy upper and mid branches
7004	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	24	Poor	
7006	Coast Redwood Sequoia sempervirens	Sequoia	39	4.5	27	Poor	Normal flare, top dead at 70', 12" from cart path

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
7009	Raywood ash Fraxinus angustifolia 'Raywood'	Fraxinus	23	4.5	45	Very Poor	Tree forks to codominant stems 8 feet above grade, a severe inclusion which is now separated into a stress fracture approximately 4 feet long or 3 1/2 4 feet above grade proximately 1/2 of the tree is leaning towards the adjacent neighbors backyard they have the trees leaning towards the golf course it should be removed like immediately
7010	Raywood ash Fraxinus angustifolia 'Raywood'	Fraxinus	36	4.5	42	Poor	The tree has severe inclusions appears as it may have started as two separate stems and then rubbed in Grafton from grade to 3 feet above grade there's reaction rose from that .28 feet above grade with evidence of inclusions and weak attachments the tree should be removed before it feels like the Jason tree.
7011	Ash species Fraxinus sp.		42	4.5	30	Poor	Modesto ash, lower trunk and lower and middle trunks covered with dense Ivy and poison oak growth making it impossible to inspect the flare or lower trunk, stem attachment inclusions on the primary and secondary attachments trees one-sided, vines should be removed from the base in the tree and further inspected.
7015	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	16	Fair	
7015	Coast Redwood Sequoia sempervirens	Sequoia	50	4.5	26	Poor	Call dominant is 12 feet above grade each dam is approximately 28 inches in diameter at that point of parent stress fracture below the crotch and through the inclusion to 6 feet above grade the tree needs to be evaluated for support system or removed.
7203	Coast Redwood Sequoia sempervirens	Sequoia	45.4	4.5	27	Poor	Buttressing flare, swollen trunk 6-10', bend in trunk, co dom atb60'

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
7204	Coast Redwood Sequoia sempervirens	Sequoia	44	4.5	28	Fair	Swollen flare, swollen trunk to 11', narrow spiraling top
7204	Coast Redwood Sequoia sempervirens	Sequoia	27.7	4.5	18	Poor	Top cut off, new leader forming from branch, small dead branches
7205	Coast Redwood Sequoia sempervirens	Sequoia	32.4	4.5		Poor	Swollen flare, leans S self correcting, bends in upper trunk
7206	Coast Redwood Sequoia sempervirens	Sequoia	17	4.5	12	Fair	
7206	Coast Redwood Sequoia sempervirens	Sequoia	32.2	4.5		Poor	Swollen flare, self correcting lean S, thin upper crown
7207	Coast Redwood Sequoia sempervirens	Sequoia	27.4	4.5	28	Poor	Straight flare, thinning foliage, browning upper third of crown
7209	Coast Redwood Sequoia sempervirens	Sequoia	23.2	4.5	12	Poor	Swollen flare, Foliage mostly dead, 15% live foliage on scattered branches
7210	Coast Redwood Sequoia sempervirens	Sequoia	58	4.5	32	Fair	
7211	Coast Redwood Sequoia sempervirens	Sequoia	33	4.5	15	Fair	
7212	Coast Redwood Sequoia sempervirens	Sequoia	62	4.5	26	Fair	
7213	Coast Redwood Sequoia sempervirens	Sequoia	38	4.5	25	Fair	
7214	Coast Redwood Sequoia sempervirens	Sequoia	39	4.5	24	Fair	
7221	Coast Redwood Sequoia sempervirens	Sequoia	35.7	4.5	21	Poor	Thinning foliage, narrow upper crown, bends in trunk
7222	Coast Redwood Sequoia sempervirens	Sequoia	33.6	4.5	19	Fair	Right of snd trap, swap for 4212, closer to green
7223	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	20.6	4.5	26	Poor	4" from cart path, trunk wounds N&E3', 1-sided crown S
7224	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	19.9	4.5	27	Fair	Co dom at 18', end wts
7225	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	22.6	4.5	19	Poor	Trunk wound W 0-8', co dom at 11', old branch failed at co dom crotch, swollen flare

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
7227	Coast Redwood Sequoia sempervirens	Sequoia	41.2	4.5	26	Fair	Swollen flare, surface roots
7228	Coast Redwood Sequoia sempervirens	Sequoia	62.2	4.5	25	Fair	Vertical, symmetrical, normal flare
7230	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	48	4.5	30	Poor	Co doms end wts, prune to reduce height spread
7231	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	52.3	4.5	51	Poor	Co dom at 4', 3rd stem yo E, long end wts, growing against fence,
7232	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	48	4.5	32	Poor	Co dom at 4', likely topped at 20-40', regrow the, end wts, prune to reduce size & spread
7233	Blue Gum Eucalypt Eucalyptus globulus	Eucalyptus	25.1	4.5	21	Poor	Multi leader at 10-15', lu lkely topped, remove
7234	Incense cedar Calocedrus decurrens	Calocedrus	16	4.5	11	Poor	Swollen flare, leans E, dieback
7235	Incense cedar Calocedrus decurrens	Calocedrus	14	4.5	16	Poor	Undersized; Low S lateral at 18", leans S, 1-sided crown S
7236	Coast Redwood Sequoia sempervirens	Sequoia	42.8	4.5	15	Fair	Leans S self correcting, swollen flare, on slope, remove
7237	Coast Redwood Sequoia sempervirens	Sequoia	38.8	4.5	19	Poor	Trunk wound 4-8' N side, co dom at 20', remove
7238	Coast Redwood Sequoia sempervirens	Sequoia	36.8	4.5	21	Fair	Last tree in row, remove
7239	Coast Redwood Sequoia sempervirens	Sequoia	27.4	4.5	15	Fair	Swollen flare,
7239	Coast Redwood Sequoia sempervirens	Sequoia	36.4	4.5	21	Fair	Normal flare
7240	Coast Redwood Sequoia sempervirens	Sequoia	36	4.5	20	Fair	Swollen flare,
7240	Coast Redwood Sequoia sempervirens	Sequoia	18.2	4.5	12	Fair	On knoll, bare soil
7241	Coast Redwood Sequoia sempervirens	Sequoia	32	4.5	18	Fair	
7241	Coast Redwood Sequoia sempervirens	Sequoia	24	4.5	21	Poor	Top broken out,
7242	Coast Redwood Sequoia sempervirens	Sequoia	36.3	4.5	16	Poor	Flattened trunk NE side,breaking cart path with flare,

Sharon Heights Golf Course Renovation Tree List

Tree #	Common Name	Genus	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condi-tion	Observation Comments
7243	Coast Redwood Sequoia sempervirens	Sequoia	31.3	4.5	18	Poor	Narrow crown, sparse foliage S side, between 2 large trees, retain 3479
7244	Coast Redwood Sequoia sempervirens	Sequoia	17.6	4.5	14	Poor	Remove, Bows in trunk at 8,12&30', by irrigation tower
10001	Coast Redwood Sequoia sempervirens	Sequoia	0	4.5		Dead	stump hole
10002	Coast Redwood Sequoia sempervirens	Sequoia	5	4.5	4	Poor	Undersized

TREE LIST PAGE 22 OF 22

APPENDIX 4 – GENERAL PRACTICES FOR TREE PROTECTION

Definitions:

Root zone: The roots of trees grow fairly close to the surface of the soil, and spread out in a radial direction from the trunk of tree. A general rule of thumb is that they spread 2 to 3 times the radius of the canopy, or 1 to 1½ times the height of the tree. It is generally accepted that disturbance to root zones should be kept as far as possible from the trunk of a tree.

Inner Bark: The bark on large valley oaks and coast live oaks is quite thick, usually 1" to 2". If the bark is knocked off a tree, the inner bark, or cambial region, is exposed or removed. The cambial zone is the area of tissue responsible for adding new layers to the tree each year, so by removing it, the tree can only grow new tissue from the edges of the wound. In addition, the wood of the tree is exposed to decay fungi, so the trunk present at the time of the injury becomes susceptible to decay. Tree protection measures require that no activities occur which can knock the bark off the trees.

Methods Used in Tree Protection:

No matter how detailed Tree Protection Measures are in the initial Arborist Report, they will not accomplish their stated purpose unless they are applied to individual trees and a Project Arborist is hired to oversee the construction. The Project Arborist should have the ability to enforce the Protection Measures. The Project Arborist should be hired as soon as possible to assist in design and to become familiar with the project. He must be able to read and understand the project drawings and interpret the specifications. He should also have the ability to cooperate with the contractor, incorporating the contractor's ideas on how to accomplish the protection measures, wherever possible. It is advisable for the Project Arborist to be present at the Pre-Bid tour of the site, to answer questions the contractors may have about Tree Protection Measures. This also lets the contractors know how important tree preservation is to the developer.

Root Protection Zone (RPZ): Since in most construction projects it is not possible to protect the entire root zone of a tree, a Root Protection Zone is established for each tree to be preserved. The minimum Root

Protection Zone is the area underneath the tree's canopy (out to the dripline, or edge of the canopy), plus 1'. The Project Arborist must approve work within the RPZ.

Irrigate, Fertilize, Mulch: Prior to grading on the site near any tree, the area within the Tree Protection fence should be fertilized with 4 pounds of nitrogen per 1000 square feet, and the fertilizer irrigated in. The irrigation should percolate at least 24 inches into the soil. This should be done no less than 2 weeks prior to grading or other root disturbing activities. After irrigating, cover the RPZ with at least 12" of leaf and twig mulch. Such mulch can be obtained from chipping or grinding the limbs of any trees removed on the site. Acceptable mulches can be obtained from nurseries or other commercial sources. Fibrous or shredded redwood or cedar bark mulch shall not be used anywhere on site.

Fence: Fence around the Root Protection Zone and restrict activity therein to prevent soil compaction by vehicles, foot traffic or material storage. The fenced area shall be off limits to all construction equipment, unless there is express written notification provided by the Project Arborist, and impacts are discussed and mitigated prior to work commencing.

Plastic 4-foot tall orange fence is proposed to be used as the tree protection fencing on this project. The length of fencing required and the contoured layout around trees is difficult to install with long chain link sections. The fencing is going to be installed and maintained by the golf course staff. The golf course is concerned about protecting their tree assets and have full time staff that will be working during the construction project to assure the trees are protected according to the tree protection plan.

The fencing should not be installed during the tree removal operations as the felling of trees will damage the fencing. Caution tape or other delineation will be used to manage the tree felling work and removal of the logs with oversight of the contractor.

The tree protection fence will be set in place prior to any construction activities in that area of the golf course, currently planned in a 4-part sequence. The construction will be phased across the course and the entire course does not need to be protected the entire time. As a work area is completed and opened for play, the fencing will be removed and placed in the next work area. The egress and access areas, and the storage areas will need to be protected the entire time. The rest of the project will be protected prior to construction and as the project moves across the course.

No storage or cleaning of equipment or materials, or parking of any equipment can take place within the fenced off area, known as the RPZ.

The fence should be highly visible, and stout enough to keep vehicles and other equipment out. I recommend the fence be made of orange plastic protective fencing, kept in place by t-posts set no farther apart than 6'.

In areas of intense impact, a 6' chain link fence is preferred.

In areas with many trees, the RPZ can be fenced as one unit, rather than separately for each tree.

Where tree trunks are within 3' of the construction area, place 2" by 4" boards vertically against the tree trunks, even if fenced off. Hold the boards in place with wire. Do not nail them directly to the tree. The purpose of the boards is to protect the trunk, should any equipment stray into the RPZ.

Elevate Foliage: Where indicated, remove lower foliage from a tree to prevent limb breakage by equipment. Low foliage can usually be removed without harming the tree, unless more than 25% of the foliage is removed. Bay Area Tree Specialists is the tree care contractor that will perform the pruning. Branches need to be removed at the anatomically correct location in order to prevent decay organisms from entering the trunk. For this reason, a contractor who is an ISA Certified Arborist should perform all pruning on protected trees.[4] Bay Area Tree Specialists is owned by an ISA Certified Arborist.

Expose and Cut Roots: Breaking roots with a backhoe, or crushing them with a grader, causes significant injury, which may subject the roots to decay. Ripping roots may cause them to splinter toward the base of the tree, creating much more injury than a clean cut would make. At any location where the root zone of a tree will be impacted by a trench or a cut (including a cut required for a fill and compaction), the roots shall be exposed with either a backhoe digging radially to the trunk, by hand digging, or by a hydraulic air spade, and then cut cleanly with a sharp instrument, such as chainsaw with a carbide chain. Once the roots are severed, the area behind the cut should be moistened and mulched. A root protection fence should also be erected to protect the remaining roots, if it is not already in place. Further grading or backhoe work required outside the established RPZ can then continue without further protection measures.

Protect Roots in Deeper Trenches: The location of utilities on the site can be very detrimental to trees. Design the project to use as few trenches as possible, and to keep them away from the major trees to be protected. Wherever possible, in areas where trenches will be very deep, consider boring under the roots of the trees, rather than digging the trench through the roots. This technique can be quite useful for utility trenches and pipelines.

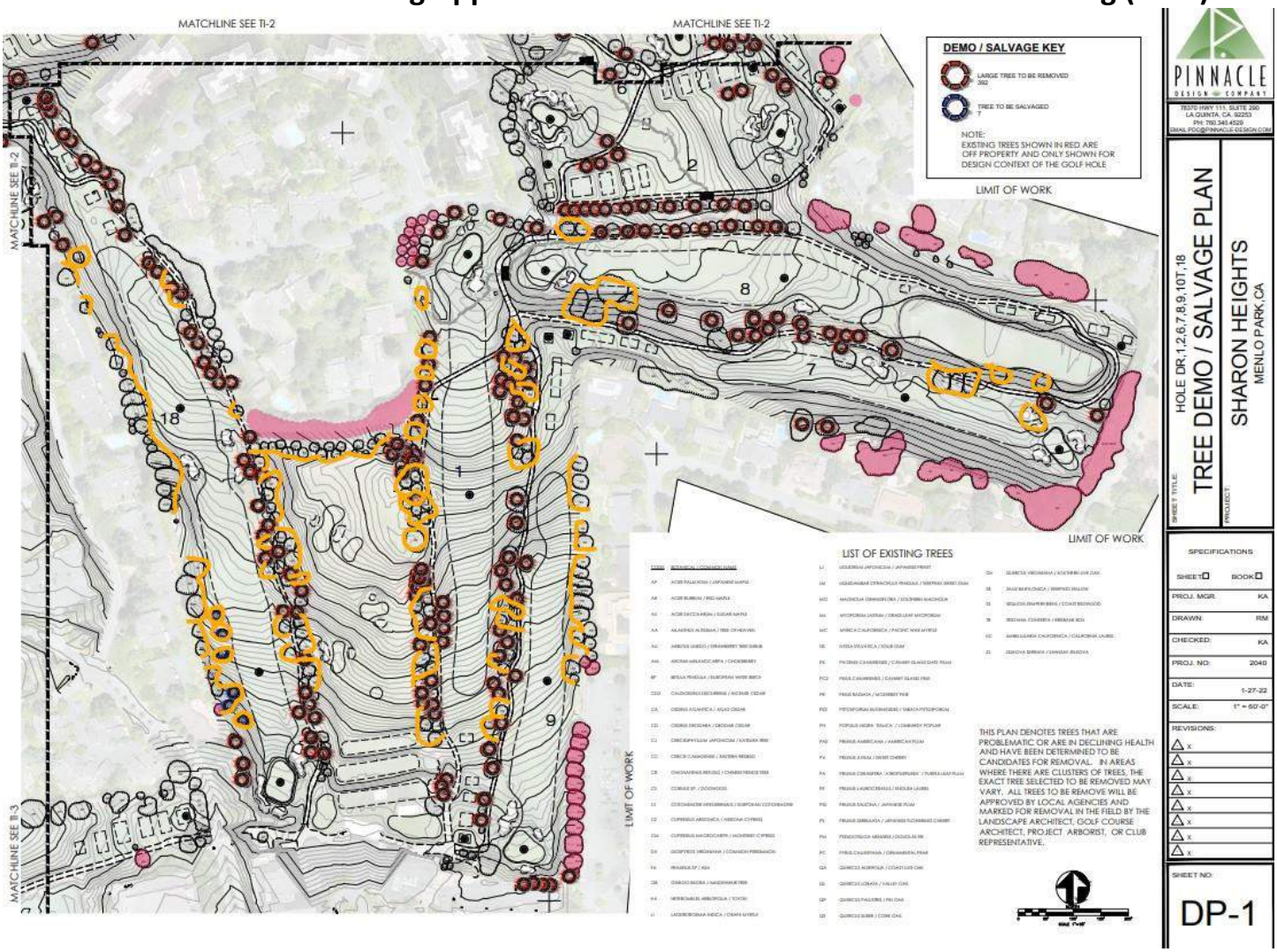
Protect Roots in Small Trenches: After all construction is complete on a site, it is not unusual for the landscape contractor to come in and sever a large number of “preserved” roots during the installation of irrigation systems. The Project Arborist must therefore approve the landscape and irrigation plans. The irrigation system needs to be designed so the main lines are located outside the root zone of major trees, and the secondary lines are either laid on the surface (drip systems), or carefully dug with a hydraulic or air spade, and the flexible pipe fed underneath the major roots.

Design the irrigation system so it can slowly apply water (no more than ¼” to ½” of water per hour) over a longer period of time. This allows deep soaking of root zones. The system also needs to accommodate infrequent irrigation settings of once or twice a month, rather than several times a week.

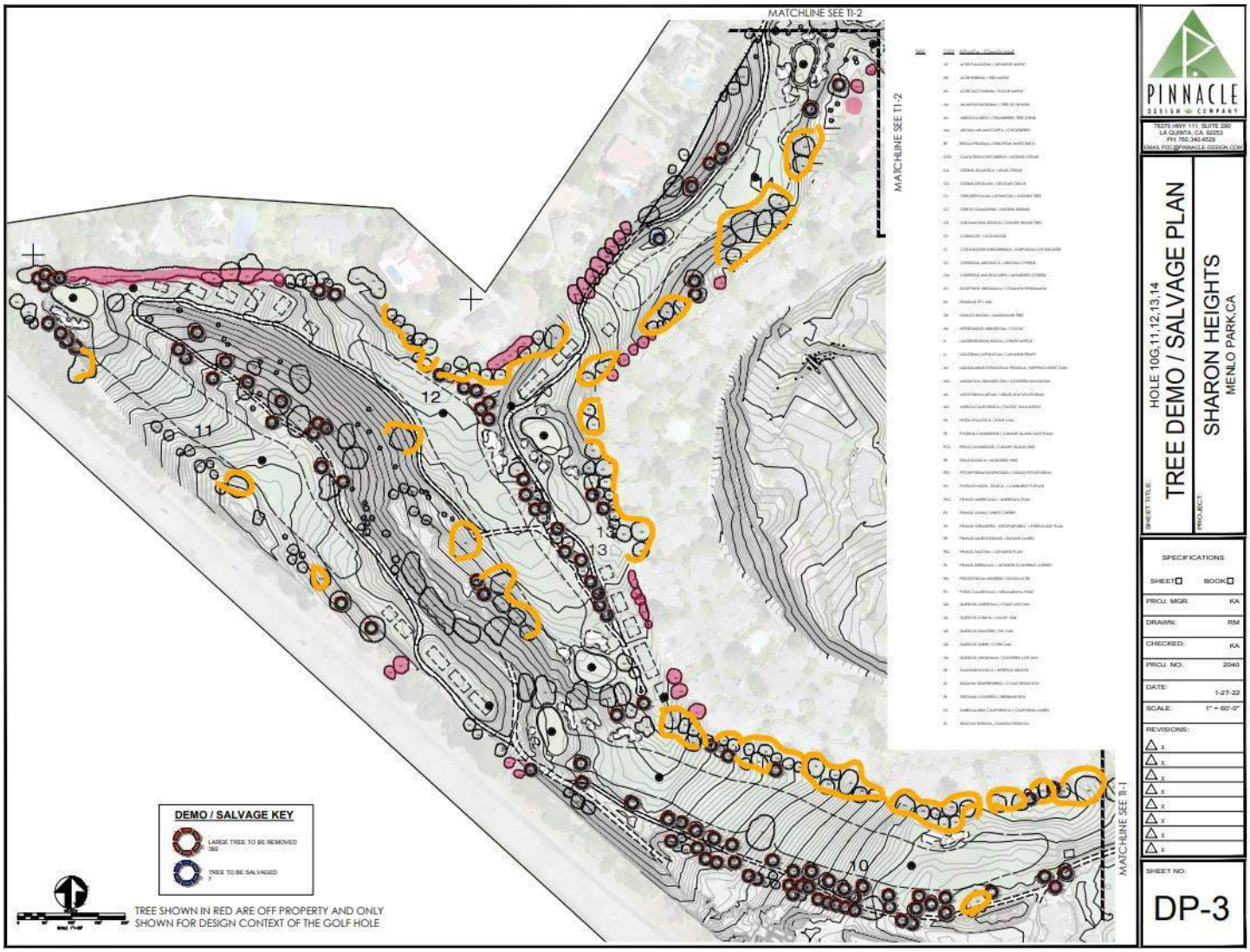
Monitoring Tree Health During and After Construction: The Project Arborist should visit the site at least twice a month during construction to be certain the tree protection measures are being followed, to monitor the health of impacted trees, and make recommendations as to irrigation or other needs. After construction is complete, the arborist should monitor the site monthly for one year and make recommendations for care where needed. If longer term monitoring is required, the arborist should report this to the developer and the planning agency overseeing the project.

[4] International Society of Arboriculture (ISA), maintains a program of Certifying individuals. Each Certified Arborist has a number and must maintain continuing education credits to remain Certified.

Demolition Plans Showing Approximate Locations of Tree Protection Fencing (Gold)

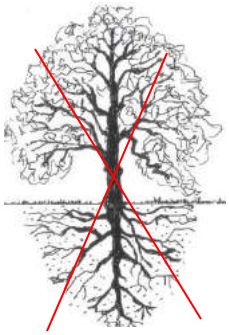



EXISTING TREE LEGEND
CODE BOTANICAL / COMMON NAME
AP ACER PALMATUM / JAPANESE MAPLE
AR ACER RUBRUM / RED MAPLE
AS ACER SACCHARUM / SUGAR MAPLE
AA AILANTHUS ALTISSIMA / TREE OF HEAVEN
AU ARBUTUS UNEDO / STRAWBERRY TREE SHRUB
AM ARONIA MELANOCARPA / CHOKEBERRY
BP BETULA PENDULA / EUROPEAN WHITE BIRCH
CD2 CALOCEDRUS DECURRENS / INCENSE CEDAR
CA CEDRUS ATLANTICA / ATLAS CEDAR
CD CEDRUS DEODARA / DEODAR CEDAR
CJ CERCIDIPHYLLUM JAPONICUM / KATSURA TREE
CC CERCIS CANADENSIS / EASTERN REDBUD
CR CHIONANTHUS RETUSUS / CHINESE FRINGE TREE
CS CORNUS SP. / DOGWOOD
CI COTONEASTER INTEGERRIMUS / EUROPEAN COTONEASTER
CZ CUPRESSUS ARIZONICA / ARIZONA CYPRESS
CM CUPRESSUS MACROCARPA / MONTEREY CYPRESS
DV DIOSPYROS VIRGINIANA / COMMON PERSIMMON
FA FRAXINUS SP / ASH
GB GINKGO BILOBA / MAIDENHAIR TREE
HA HETEROMELES ARBUTIFOLIA / TOYON
LI LAGERSTROEMIA INDICA / CRAPE MYRTLE
LJ LIGUSTRUM JAPONICUM / JAPANESE PRIVET
LM LIQUIDAMBAR STYRACIFLUA PENDULA / WEEPING SWEET GUM
MG MAGNOLIA GRANDIFLORA / SOUTHERN MAGNOLIA
ML MYOPORUM LAETUM / GRASS LEAF MYOPORUM
MC MYRICA CALIFORNICA / PACIFIC WAX MYRTLE
NS NYSSA SYLVATICA / SOUR GUM
PX PHOENIX CANARIENSIS / CANARY ISLAND DATE PALM
PC2 PINUS CANARIENSIS / CANARY ISLAND PINE
PR PINUS RADIATA / MONTEREY PINE
PE2 PITTOSPORUM EUGENIOIDES / TARATA PITTOSPORUM
PN POPULUS NIGRA 'ITALICA' / LOMBARDY POPLAR
PA2 PRUNUS AMERICANA / AMERICAN PLUM
PV PRUNUS AVIUM / SWEET CHERRY
PA PRUNUS CERASIFERA 'ATROPURPUREA' / PURPLE-LEAF PLUM
PE PRUNUS LAUROCERASUS / ENGLISH LAUREL
PS2 PRUNUS SALICINA / JAPANESE PLUM
PS PRUNUS SERRULATA / JAPANESE FLOWERING CHERRY
PM PSEUDOTSUGA MENZIESII / DOUGLAS FIR
PC PYRUS CALLERYANA / ORNAMENTAL PEAR
QA QUERCUS AGRIFOLIA / COAST LIVE OAK
QL QUERCUS LOBATA / VALLEY OAK
QP QUERCUS PALUSTRIS / PIN OAK
QS QUERCUS SUBER / CORK OAK
QV QUERCUS VIRGINIANA / SOUTHERN LIVE OAK
SB SALIX BABYLONICA / WEEPING WILLOW
SS SEQUOIA SEMPERVIRENS / COAST REDWOOD
TB TRISTANIA CONFERTA / BRISBANE BOX
UC UMBELLULARIA CALIFORNICA / CALIFORNIA LAUREL
ZS ZELKOVA SERRATA / SAWLEAF ZELKOVA
15
16
4
3
5
7
MATCHLINE SEE TI-3
MATCHLINE SEE TI-1
MATCHLINE SEE TI-3
MATCHLINE SEE TI-1
MATCHLINE SEE TI-1
DEMO / SALVAGE KEY
LARGE TREE TO BE REMOVED 202
TREE TO BE SALVAGED 7
TREE SHOWN IN RED ARE OFF PROPERTY AND ONLY SHOWN FOR DESIGN CONTEXT OF THE GOLF HOLE
PINNACLE DESIGN COMPANY
78370 HWY 111, SUITE 200
LA QUINTA, CA. 92253
PH: 760.340.4529
SHEET TITLE:
TREE DEMO / SALVAGE PLAN
HOLE 3,4,5,15,16,17
PROJECT:
SHARON HEIGHTS
MENLO PARK,CA
SPECIFICATIONS
SHEET
BOOK
PROJ. MGR. KA
DRAWN: RM
CHECKED: KA
PROJ. NO: 2040
DATE: 1-27-22
SCALE: 1" = 60'-0"
REVISIONS:
SHEET NO:
DP-2

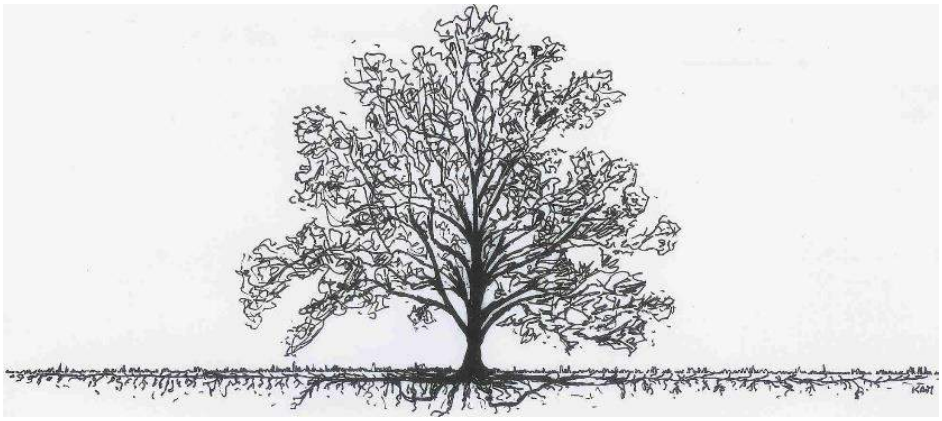


Root Structure

The majority of a tree's roots are contained in a radius from the main trunk outward approximately two to three times the canopy of the tree. These roots are located in the top 6" to 3' of soil. It is a common misconception that a tree underground resembles the canopy (see Drawing A below). The correct root structure of a tree is in Drawing B. All plants' roots need both water and air for survival. Surface roots are a common phenomenon with trees grown in compacted soil. Poor canopy development or canopy decline in mature trees is often the result of inadequate root space and/or soil compaction.



Drawing A
Common misconception of where tree roots are assumed to be located



Drawing B
The reality of where roots are generally located

Structural Issues

Limited space for canopy development produces poor structure in trees. The largest tree in a given area, which is 'shading' the other trees is considered Dominant. The 'shaded' trees are considered Suppressed. The following picture illustrates this point. Suppressed trees are more likely to become a potential hazard due to their poor structure.

Dominant Tree

Growth is upright

Canopy is balanced by limbs and foliage equally

Suppressed Tree

Canopy weight all to one side

Limbs and foliage grow away from dominant tree

Co-dominant leaders are another common structural problem in trees.

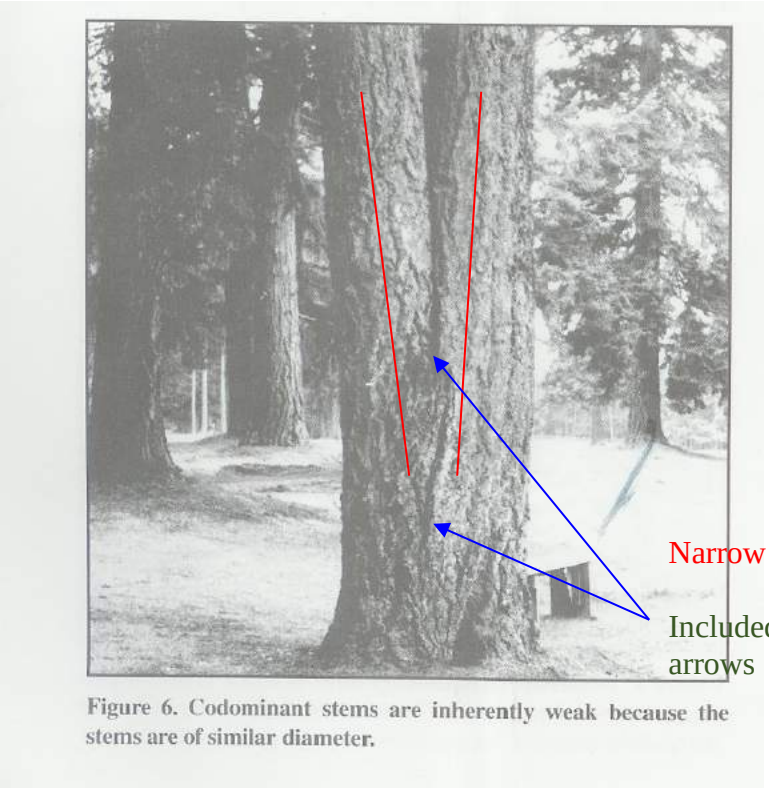


Figure 6. Codominant stems are inherently weak because the stems are of similar diameter.

The tree in this picture has a co-dominant leader at about 3' and included bark up to 7 or 8'. Included bark occurs when two or more limbs have a narrow angle of attachment resulting in bark between the stems – instead of cell to cell structure. This is considered a critical defect in trees and is the cause of many failures.

Photo from Evaluation of Hazard Trees in Urban Areas by Nelda P. Matheny and James R. Clark, 1994 International Society of Arboriculture

Pruning Mature Trees for Risk Reduction

There are few good reasons to prune mature trees. Removal of deadwood, directional pruning, removal of decayed or damaged wood, and end-weight reduction as a method of mitigation for structural faults are the only reasons a mature tree should be pruned. Live wood over 3" should not be pruned unless absolutely necessary. Pruning cuts should be clean and correctly placed. Pruning should be done in accordance with the American National Standards Institute (ANSI) A300 standards. It is far better to use more small cuts than a few large cuts as small pruning wounds reduce risk while large wounds increase risk.

Pruning causes an open wound in the tree. Trees do not "heal" they compartmentalize. Any wound made today will always remain, but a healthy tree, in the absence of decay in the wound, will 'cover it' with callus tissue. Large, old pruning wounds with advanced decay are a likely failure point. Mature trees with large wounds are a high failure risk.

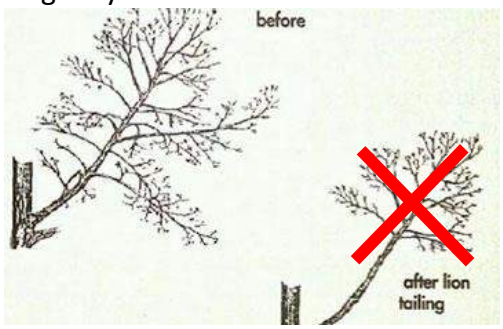
Overweight limbs are a common structural fault in suppressed trees. There are two remedial actions for overweight limbs (1) prune the limb to reduce the extension of the canopy, or (2) cable the limb to reduce movement. Cables do not hold weight they only stabilize the limb and require annual inspection.

Photo of an example tree – not on this site.

Photo of an example tree – not on this

Lion's – Tailing is the pruning practice of removal of "an excessive number of inner and/or lower lateral branches from parent branches. Lion's tailing is not an acceptable pruning practice" ANSI A300 (part 1) 4.23. It increases the risk of failure.

Pruning – Cutting back trees changes their natural structure, while leaving trees in their natural form enhances longevity.



Arborist Classifications

There are different types of Arborists:

Tree Removal and/or Pruning Companies. These companies may be licensed by the State of California to do business, but they do not necessarily know anything about trees;

Arborists. Arborist is a broad term. It is intended to mean someone with specialized knowledge of trees but is often used to imply knowledge that is not there.

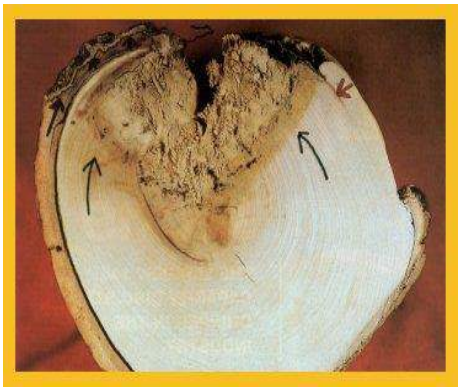
ISA Certified Arborist: An International Society of Arboriculture Certified Arborist is someone who has been trained and tested to have specialized knowledge of trees. You can look up certified arborists at the International Society of Arboriculture website: isa-arbor.org.

Consulting Arborist: An American Society of Consulting Arborists Registered Consulting Arborist is someone who has been trained and tested to have specialized knowledge of trees and trained and tested to provide high quality reports and documentation. You can look up registered consulting arborists at the American Society of Consulting Arborists website: https://www.asca-consultants.org/

Decay in Trees

Decay (in General): Fungi cause all decay of living trees. Decay is considered a disease because cell walls are altered, wood strength is affected, and living sapwood cells may be killed. Fungi decay wood by secreting enzymes. Different types of fungi cause different types of decay through the secretion of different chemical enzymes. Some decays, such as white rot, cause less wood strength loss than others because they first attack the lignin (causes cell walls to thicken and reduces susceptibility to decay and pest damage) secondarily the cellulose (another structural component in a cell walls). Others, such as soft rot, attack the cellulose chain and cause substantial losses in wood strength even in the initial stages of decay. Brown rot causes wood to become brittle and fractures easily with tension. Identification of internal decay in a tree is difficult because visible evidence may not be present.

According to Evaluation of Hazard Trees in Urban Areas (Matheny, 1994) decay is a critical factor in the stability of the tree. As decay progresses in the trunk, the stem becomes a hollow tube or cylinder rather than a solid rod. This change is not readily apparent to the casual observer. Trees require only a small amount of bark and wood to transport water, minerals and sugars. Interior heartwood can be eliminated (or degraded) to a great degree without compromising the transport process. Therefore, trees can contain significant amounts of decay without showing decline symptoms in the crown.



Compartmentalization of decay in trees is a biological process in which the cellular tissue around wounds is changed to inhibit fungal growth and provide a barrier against the spread of decay agents into the barrier zones is the formation of while a tree may be able to limit pruning cuts, in the event that there located vertically along the main trunk of the tree, the likelihood of decay progression and the associated structural loss of integrity of the internal wood is high.

additional cells. The weakest of the vertical wall. Accordingly, decay progression inward at large are more than one pruning cut

Oak Tree Impacts

Our native oak trees are easily damaged or killed by having the soil within the Critical Root Zone (CRZ) disturbed or compacted. All of the work initially performed around protected trees that will be saved should be done by people rather than by wheeled or track type tractors. Oaks are fragile giants that can take little change in soil grade, compaction, or warm season watering. Don't be fooled into believing that warm season watering has no adverse effects on native oaks. Decline and eventual death can take as long as 5-20 years with poor care and inappropriate watering. Oaks can live hundreds of years if treated properly during construction, as well as later with proper pruning, and the appropriate landscape/irrigation design.

APPENDIX 5 – PHOTOGRAPHS

THE FOLLOWING IMAGES SHOW THE AREAS WHERE THE TREE REMOVALS ARE PROPOSED:


#3 left


#3 left


#4


#4


#5


#5


#5


#5


#5


#5


#5 left


#5 left


#5 right


#5 right
green


#5 left
green


#6
R&L


7&8 left


7&8
left


7 8 left


7 left
green


8 right


8 right green


9 right
tee


9 right


9 right


#9 back of
green


10 right


10 left


10 left


10 left


10 left
Eucs


11 right


12 left
M. Pines


12 left


12 left


12
green

i


16 left
tee


16 left


16 left


16 left


16 right


17 left
green


19 tee
right


19 left


18 left
sand


18 right
trees


18 left


18 left
green

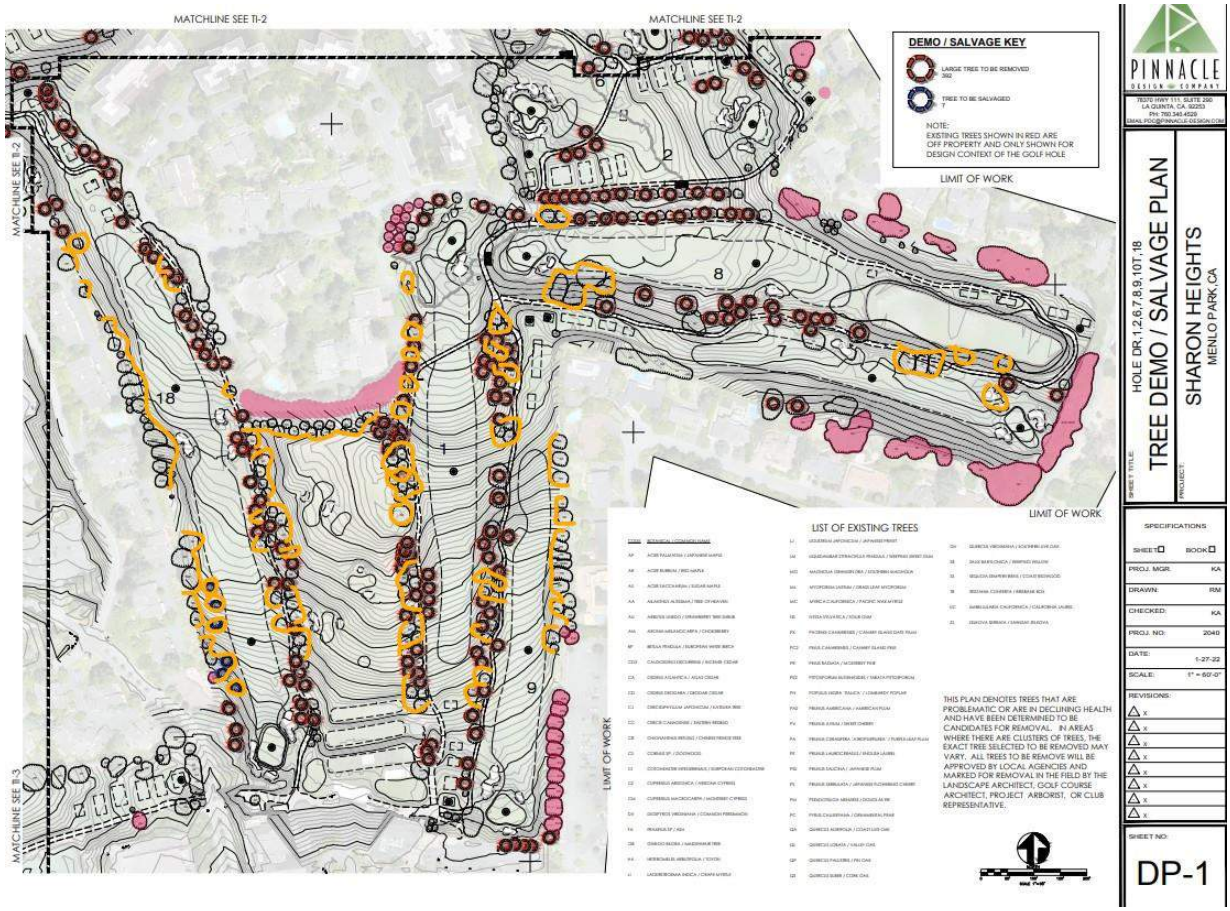
AN AERIAL IMAGE OF THE GOLF COURSE IN 1965 BEFORE ALL THE MEMBERS PLANTED THE TREES:

APPENDIX 6 – TREE PROTECTION SPECIFICATIONS

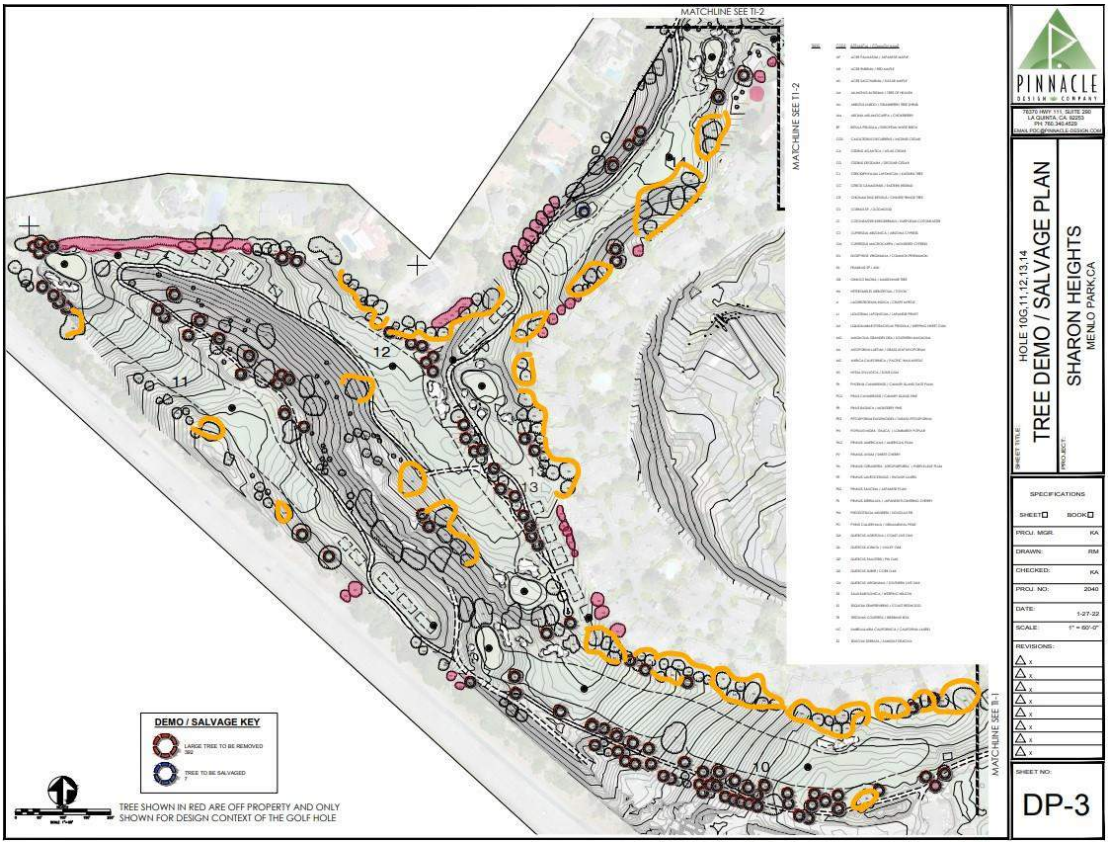
The trees proposed to be retained are along the sides of the fairways. The trees can be protected with fencing. While normally chain link fence is required by the City, the golf course has a history of working around their trees. The course is requesting an exception to the chain link material. They are proposing using orange plastic fence. The reason for this request is the shear length of the fairways and the availability of enough chain link fence for the project area. The course is estimated at 6837 yards, which translates to 3.9 miles of fairways. While they are not lining all the fairways, there will be long stretches of trees to be worked around and many individual and small groups of trees to protect. To work proposed on both sides of the fairways could encompass miles of fencing over the life of the project. If the contractor is able to design the work process and move the fence in a rolling construction sequence, we are still looking at potentially up to a mile of fencing to be installed to protect the remaining trees during the demolition and installation process.

During excavation, as the excavation approaches the tree driplines and protected areas, the roots 2" diameter and greater at the outside edge of the excavation closest to the trees shall be pruned to prior to excavating the roots from the soil to avoid tearing the roots farther back towards the trees. This practice limits the impact to the trees to the point where the roots are pruned. Pruning shall be performed with a sharp tool appropriate for the diameter of the root being severed, and clean cuts being made. If the root-cut site is open for more than 24 hours, a moist cover shall be put over exposed roots. The moist cover can be wet burlap, covered with a tarp to slow the evaporation from the burlap, or a comparable moisture protection. The moisture protection shall be in place until the roots are buried with soil.

The plan sheets show the areas for providing tree protection:




EXISTING TREE LEGEND
DEMO / SALVAGE KEY
LARGE TREE TO BE REMOVED
TREE TO BE SALVAGED
TREE SHOWN IN RED ARE OFF PROPERTY AND ONLY SHOWN FOR DESIGN CONTEXT OF THE GOLF HOLE
MATCHLINE SEE TI-3
MATCHLINE SEE TI-1
PINNACLE
TREE DEMO / SALVAGE PLAN
HOLE 3,4,5,15,16,17
SHARON HEIGHTS
MENLO PARK,CA
SPECIFICATIONS
DP-2


MATCHLINE SEE TI-2
MATCHLINE SEE TI-1
DEMO / SALVAGE KEY
LARGE TREE TO BE REMOVED
TREE TO BE SALVAGED
TREE SHOWN IN RED ARE OFF PROPERTY AND ONLY SHOWN FOR DESIGN CONTEXT OF THE GOLF HOLE
PINNACLE
TREE DEMO / SALVAGE PLAN
HOLE 10G,11,12,13,14
SHARON HEIGHTS
MENLO PARK,CA
SPECIFICATIONS
DP-3

There is further tree protection information below provided by the City of Menlo Park.

COMMUNITY DEVELOPMENT DEPT.
701 Laurel Street
Menlo Park, CA 94025
650.330.6704
2/28/2011

TREE PROTECTION SPECIFICATIONS

1. A 6" layer of coarse mulch or woodchips is to be placed beneath the dripline of the protected trees. Mulch is to be kept 12" from the trunk.

2. A protective barrier of 6' chain link fencing shall be installed around the dripline of protected tree(s). The fencing can be moved within the dripline if authorized by the Project Arborist or City Arborist but not closer than 2' from the trunk of any tree. Fence posts shall be 1.5" in diameter and are to be driven 2' into the ground. The distance between posts shall not be more than 10'. This enclosed area is the Tree Protection Zone (TPZ).

3. Movable barriers of chain link fencing secured to cement blocks can be substituted for "fixed" fencing if the Project Arborist and City Arborist agree that the fencing will have to be moved to accommodate certain phases of construction. The builder may not move the fence without authorization form the Project Arborist or City Arborist.

4. Where the City Arborist or Project Arborist has determined that tree protection fencing will interfere with the safety of work crews, Tree Wrap may be used as an alternative form of tree protection. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City Arborist or Project Arborist. Straw waddle may also be used as a trunk wrap by coiling the waddle around the trunk up to a minimum height of six feet from grade. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the straw waddle.

5. **Avoid the following conditions.**
   DO NOT:
   a. Allow run off of spillage of damaging materials into the area below any tree canopy.
   b. Store materials, stockpile soil, or park or drive vehicles within the TPZ.
   c. Cut, break, skin, or bruise roots, branches, or trunks without first obtaining authorization from the City Arborist.
   d. Allow fires under and adjacent to trees.
   e. Discharge exhaust into foliage.
   f. Secure cable, chain, or rope to trees or shrubs.
   g. Trench, dig, or otherwise excavate within the dripline or TPZ of the tree(s) without first obtaining authorization from the City Arborist.
   h. Apply soil sterilants under pavement near existing trees.

6. Only excavation by hand or compressed air shall be allowed within the dripline of trees. Machine trenching shall not be allowed.

7. Avoid injury to tree roots. When a ditching machine, which is being used outside of the dripline of trees, encounters roots smaller than 2", the wall of the trench adjacent to the trees shall be hand trimmed, making clear, clean cuts through the roots. All damaged, torn and cut roots shall be given a clean cut to remove ragged edges, which promote decay. Trenches shall be filled within 24 hours, but where this is not possible, the side of the trench adjacent to the trees shall be kept shaded with four layers of dampened, untreated burlap, wetted as frequently as necessary to keep the burlap wet. Roots 2" or larger, when encountered, shall be reported immediately to the Project Arborist, who will decide whether the Contractor may cut the root as mentioned above or shall excavate by hand or with compressed air under the root. Root is to be protected with dampened burlap.

8. Route pipes outside of the area that is 10 times the diameter of a protected tree to avoid conflict with roots.

9. Where it is not possible to reroute pipes or trenches, the contractor shall bore beneath the dripline of the tree. The boring shall take place not less than 3' below the surface of the soil in order to avoid encountering "feeder" roots.

10. Trees that have been identified in the arborist's report as being in poor health and/or posing a health or safety risk, may be removed or pruned by more than one-third, subject to approval of the required permit by the Planning Division. Pruning of existing limbs and roots shall only occur under the direction of a Certified Arborist.

11. Any damage due to construction activities shall be reported to the Project Arborist or City Arborist within six hours so that remedial action can be taken.

12. An ISA Certified Arborist or ASCA Registered Consulting Arborist shall be retained as the Project Arborist to monitor the tree protection specifications. The Project Arborist shall be responsible for the preservation of the designated trees. Should the builder fail to follow the tree protection specifications, it shall be the responsibility of the Project Arborist to report the matter to the City Arborist as an issue of non-compliance.

13. Violation of any of the above provisions may result in sanctions or other disciplinary action.

MONTHLY INSPECTIONS

It is required that the site arborist provide periodic inspections during construction.
Four-week intervals would be sufficient to access and monitor the effectiveness of the Tree Protection Plan and to provide recommendations for any additional care or treatment.

W:\HANDOUTS\Approved Tree Protection Specifications 2009.doc

Appendix 7 Tree Replacement Plan

The revised tree replacement plan has been provided by the designer. The plans are shown below. The proposed tree planting will be 208 trees with a total value of $1,510,000. The values are based on the Menlo Park replacement value analysis. I expanded the list based on the values Menlo Park used to include 72-inch and 84-inch boxed trees with increased valuation:

Tree Disposition	Total Trees	Estimated value
Health Related tree Removal	92	$154,800
Developmant related tree removal	258	$625,900
Total tree removal mitigation value		$780,700

TREE REPLACEMENT VALUE ANALYSIS (TREES REPRESENTED ON PLANS) rev.01-30-23

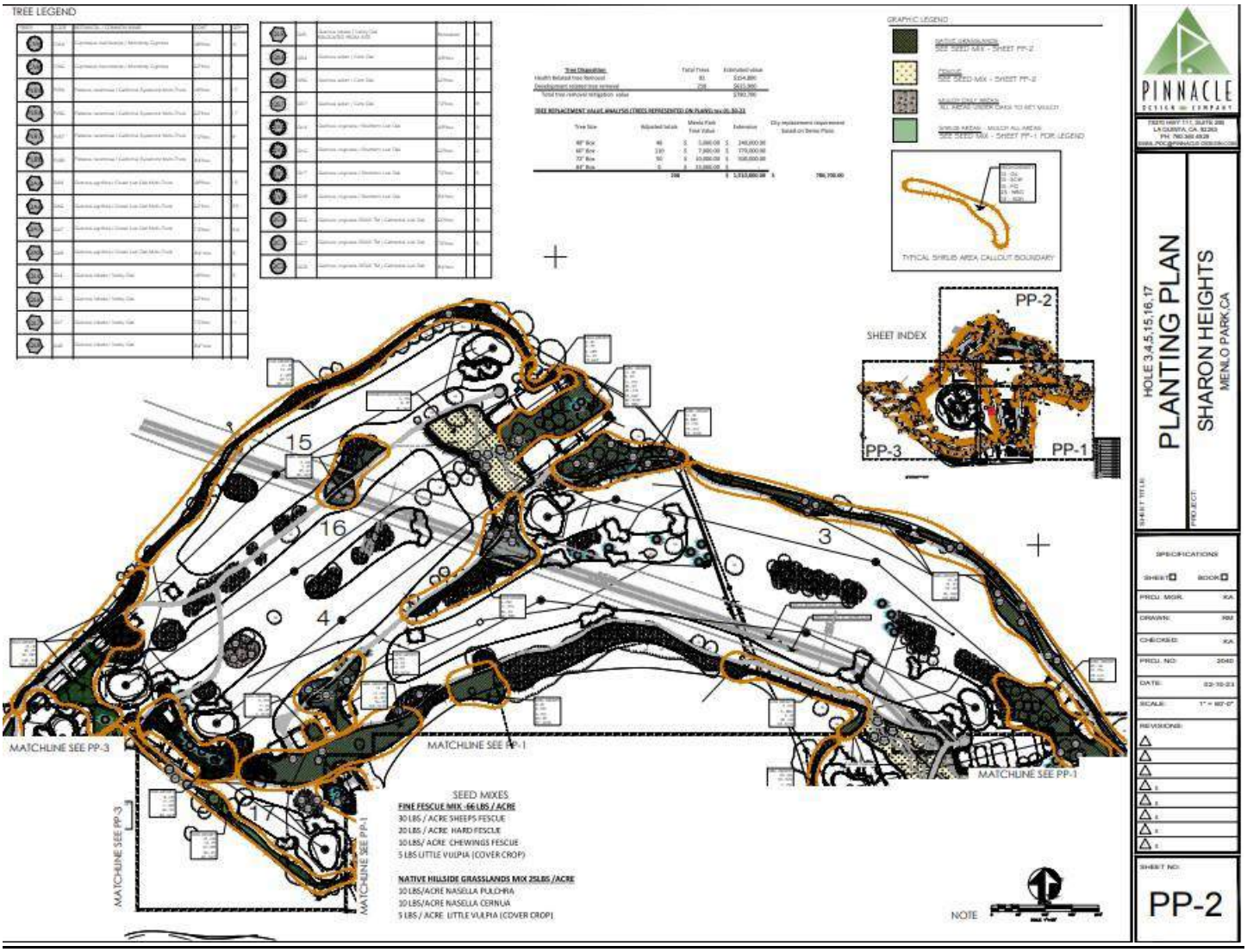
Tree Size	Adjusted totals	Menlo Park Tree Value	Extension	City replacement requirement based on Demo Plans
48" Box	48	$ 5,000.00	$ 240,000.00	
60" Box	110	$ 7,000.00	$ 770,000.00	
72" Box	50	$ 10,000.00	$ 500,000.00	
84" Box	0	$ 15,000.00	$ -	
	208		**$ 1,510,000.00**	**$ 780,700.00**

The total value of the proposed planting of $1,510,000 exceeds the appraised value of the removed Heritage Trees at $780,700.

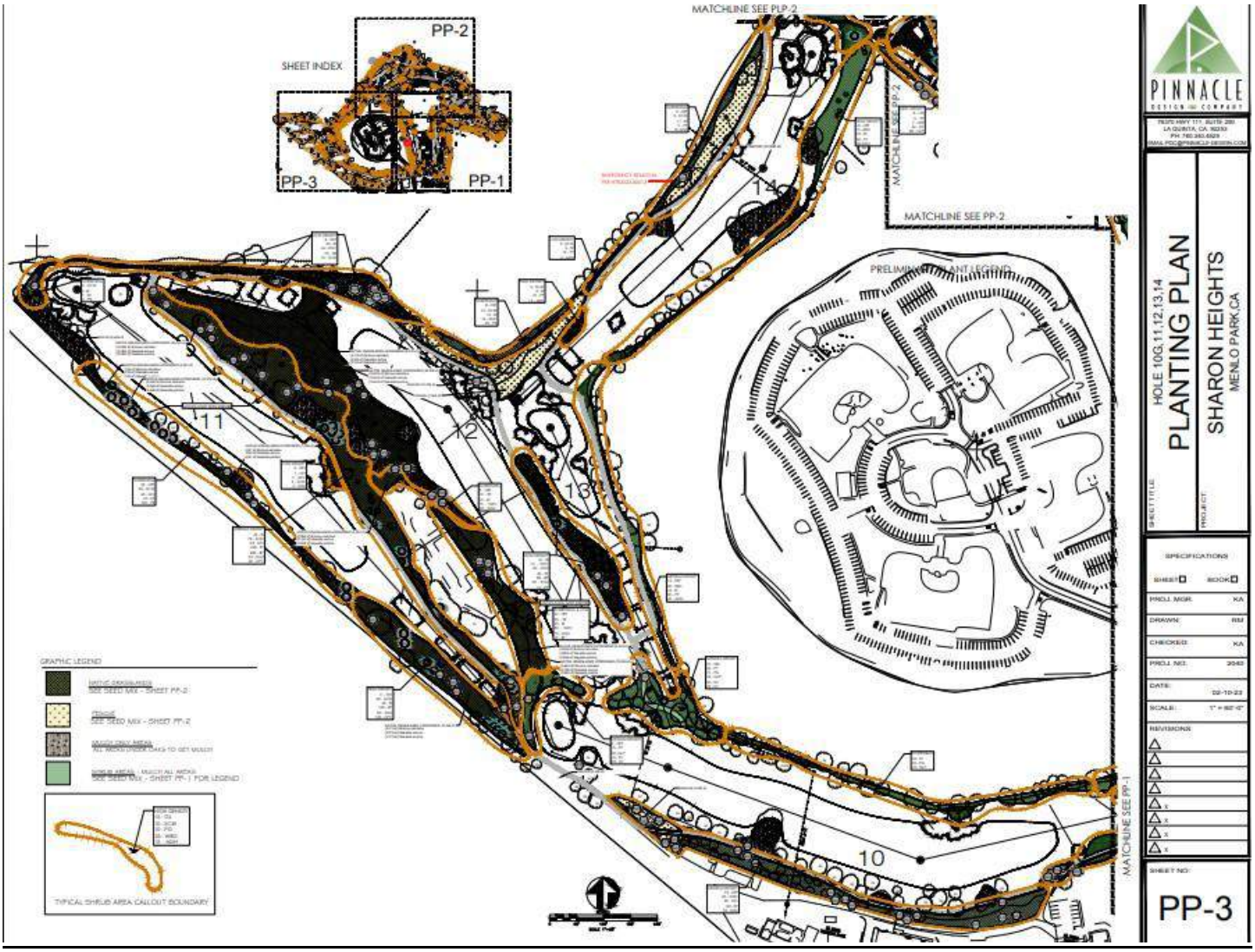
The planting plan is shown below on 3 plan pages. There may be some final revisions to the tree locations as the Hetch Hetchy agreement for their right-of-way may not allow any trees to be planted in the Hetch Hetchy right-of-way.


MATCHLINE SEE PP-2
GRAPHIC LEGEND
NATIVE GRASSLANDS
SEE SEED MIX - SHEET PP-2
FESCUE
SEE SEED MIX - SHEET PP-2
MULCH ONLY AREAS
ALL AREAS UNDER OAKS TO GET MULCH
SHRUB AREAS - MULCH ALL AREAS
SEE SEED MIX - SHEET PP-1 FOR
SHEET INDEX
PP-2
PP-3
PP-1
PLANT LEGEND
SEE SHEET PP-2 TREE, GRASS AND MULCH LEGEND
SEE SHEET PP-4 FOR PLANTING DETAILS AND NOTES
SEE BOOK SPECIFICATIONS FOR MORE INFO.
SEE SHEET DP-1 THRU DP-3 FOR SALVAGE TREE INFO.
PINNACLE
HOLE DR:1,2,6,7,8,9,10T,18
PLANTING PLAN
SHARON HEIGHTS
MENLO PARK,CA
SPECIFICATIONS
PROJ. MGR.
DRAWN
CHECKED
PROJ. NO.
DATE
SCALE
REVISIONS
SHEET NO:
PP-1

Page PP1


TREE LEGEND
GRAPHIC LEGEND
SHEET INDEX
PP-2
PP-3
PP-1
15
16
4
3
17
MATCHLINE SEE PP-3
MATCHLINE SEE PP-1
MATCHLINE SEE PP-1
MATCHLINE SEE PP-3
MATCHLINE SEE PP-1
SEED MIXES
FINE FESCUE MIX -66 LBS / ACRE
30 LBS / ACRE SHEEPS FESCUE
20 LBS / ACRE HARD FESCUE
10 LBS/ ACRE CHEWINGS FESCUE
5 LBS LITTLE VULPIA (COVER CROP)
NATIVE HILLSIDE GRASSLANDS MIX 25LBS /ACRE
10 LBS/ACRE NASELLA PULCHRA
10 LBS/ACRE NASELLA CERNUA
5 LBS / ACRE LITTLE VULPIA (COVER CROP)
NOTE
PINNACLE
HOLE 3,4,5,15,16,17
PLANTING PLAN
SHARON HEIGHTS
MENLO PARK,CA
SPECIFICATIONS
PP-2

Page PP2


PP-2
SHEET INDEX
PP-3
PP-1
MATCHLINE SEE PLP-2
MATCHLINE SEE PP-2
PRELIMINARY PLANT LEGEND
GRAPHIC LEGEND
PINNACLE
HOLE 10G,11,12,13,14
PLANTING PLAN
SHARON HEIGHTS
MENLO PARK,CA
SPECIFICATIONS
PROJ. MGR. KA
DRAWN RM
CHECKED KA
DATE 02-10-23
SCALE 1" = 80'-0"
REVISIONS
SHEET NO:
PP-3

Page PP3

APPENDIX 8 TERMS

Species of trees is listed by our local common name and botanical name by genus and species.

DBH (diameter breast high) is normally measured at 4'6" (54" above the average ground, height but if that varies then the location where it is measured is noted here. A steel diameter tape was used to measure the trees.

Canopy radius is measured in feet. It is the farthest extent of the crown composed of leaves and small twigs measured by a steel tape. This measurement often defines the Critical Root Zone (CRZ) or Protection Zone (PZ), which is a circular area around a tree with a radius equal to this measurement.

Actions listed are recommendations to improve health or structure of the tree. Trees in public spaces require maintenance. If a tree is to remain and be preserved, then the tree may need some form of work to reduce the likelihood of failure and increase the longevity of the tree. Preservation requirements and actions based on a proposed development plan are not included here.

Arborist Rating is subjective to condition and is based on both the health and structure of the tree. All of the trees were rated for condition, per the recognized national standard as set up by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) on a numeric scale of 5 (being the highest) to 0 (the worst condition, dead). The rating was done in the field at the time of the measuring and inspection.

Table A – Ratings Descriptions

No problem(s)	5	excellent
No apparent problem(s)	4	good
Minor problem(s)	3	fair
Major problem(s)	2	poor
Extreme problem(s)	1	hazardous, non-correctable
Dead	0	dead

Rating #0: This indicates a tree that has no significant sign of life.

Rating #1: The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a dangerous situation.

Rating #2: The tree has major problems. If the option is taken to preserve the tree, its condition could be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, fertilization, etc. If the recommended actions are completed correctly, hazard can be reduced and the rating can be elevated to a 3. If no action is taken the tree is considered a liability and should be removed.

Rating #3: The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated.

Rating #4: The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future hazard can be reduced and more serious health problems can be averted.

Rating #5: No problems found from a visual ground inspection. Structurally, these trees have properly spaced branches and near perfect characteristics for the species. Highly rated trees are not common in natural or developed landscapes. No tree is ever perfect especially with the unpredictability of nature, but with this highest rating, the condition should be considered excellent.

Notes indicate the health, structure and environment of the tree and explain why the tree should be removed or preserved. Additional notes may indicate if problems are minor, extreme or correctible.

Remove is the recommendation that the tree be removed. The recommendation will normally be based either on poor structure or poor health and is indicated as follows:

Yes H – Tree is unhealthy
Yes S – Tree is structurally unsound

Assignment Assumptions and Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant‘s prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant’s fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

Report Assumptions and Limitations:

This report provides information about the subject trees at the times of the inspection. Trees and conditions may change over time. This report is only valid for the trees with the conditions present at the times of the inspections. All observations were made while standing on the ground. The inspection consisted of visual observations, using a probe to gain additional information about decay and hollow portions of the tree, and if needed, light excavation was performed to observe shallow depth areas below grade at the base of the trees. No further examinations were requested or performed.

Sincere attempts were made to accurately locate the trees and show the trees on the pan. All tree locations were attempted to be shown as observed in the field.

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 seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that can 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.

Treatments, 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, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the recommended treatment or remedial measures.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks is to eliminate all trees. Our company goal is to help clients enjoy life with trees, and grow better trees.

Certificate of Performance

I, Gordon Mann, certify that:

Certified Arborists Ed Stirtz, WE-0510A, Tom Stein, WE-12854A, Tyler Thompson, WE-12751A, and Gordon Mann, WE-0151AM have personally inspected the trees and site referred to in this report, and I have reviewed all the data and stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and an ISA Certified Arborist and Municipal Specialist. I am also a Registered Consulting Arborist member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 43 years.

Signed:

Gordon Mann
Date: February 10, 2023

California Tree and Landscape Consulting, Inc.

January 31, 2023

Mr. Curt Wozniak
Sharon Heights Golf and Country Club
2900 Sand Hill Rd
Menlo Park, CA 94025
VIA Email: curtwoz@aol.com

AMENDED ARBORIST REPORT FOR INSTALLATION OF SOLAR PANELS

RE: Arborist Report, Tree Inventory, for Installation of Solar Panels at 2900 Sand Hill Rd, Menlo Park, California

Executive Summary:

Sharon Heights Golf and Country Club contacted California Tree and Landscape Consulting, Inc. to assess the trees for the proposed installation of solar panels in the parking lot and on the buildings. The solar panels will be on canopies in the parking lot and as arrays on the buildings. There are trees along the parking lot and buildings and in the adjacent open space on the south side of the panels that will need to be removed for sun exposure on the solar panels. This is part of the Sharon Heights Golf and Country Club's sustainability approach for the property. Those trees will be mitigated with planting to meet the Menlo Park Heritage Tree mitigation requirements.

Sharon Heights Golf and Country Club requested an arborist report, tree inventory, construction impact assessment and tree protection plan suitable for submittal to the City of Menlo Park. This is the Final Arborist Report, Tree Inventory, Impact Assessment, and Tree Protection Plan for the permit to install the solar panels.

All of the trees in the open space south of the parking lot are proposed to be removed for the solar canopy to be installed and receive sun exposure. The canopies will extend close to the open space area. There are existing Eucalyptus trees in the open space that qualify as Heritage Trees and should be removed due to poor condition regardless of the proposed solar panel installation project. The Heritage Trees in Fair condition and better will need to be mitigated for the tree removals, and mitigation is proposed based on appraised value. The trees and 4 stumps that are in poor condition and worse will be mitigated using the Menlo Park Trunk Diameter Range Mitigation Requirement. There are 24 Heritage Trees and 61 undersized trees proposed for removal. There are 7 Heritage Trees in Fair or better condition that were appraised, and there are 21 Heritage Trees in poor or worse condition including 4 stumps of protected size that were valued using the Menlo Park trunk diameter range replacement process. The appraised value of the 7 Fair condition trees was appraised to be $17,100. The 21 Poor condition and worse trees value was calculated to be $15,600. The total proposed mitigation value is $32,700. The revised proposed mitigation planting value was $68,200. The mitigation may be adjusted and will meet or exceed the $32,700 mitigation requirement. There are 18 trees included in the inventory from the Front Gate Entry project, 17 removed and 1 protected tree off-site that are not part of this project and already mitigated.

The tree summary chart:

Tree Species	Trees on this Site	Protected Trees on the Site	Non-Heritage Trees	Proposed for Removal for Construction	Diameter inches of protected removed trees	Protected Trees Proposed for Removal	Total Proposed for Retention
Coast Redwood	19	1	18	19	16	1	0
Eucalyptus	28	16	12	25	351	13	3
Coast Live Oak	19	6	13	19	77	6	0
Other species trees	42	5	37	29	91	4	13
Stumps	8	0	8	8	135	0	0
TOTALS	**116**	**28**	**88**	**100**	**670**	**24**	**16**
Gate Entry Removals previously approved & included in totals	18	4	-	18	123	4	0

ASSIGNMENT

Perform an examination of the site to document the presence and condition of trees protected by the City of Menlo Park. In addition, all trees ≥6" DBH (non-protected) are included in the inventory and shown on the tree inventory exhibit. The study area for this effort includes the deeded parcel as delineated in the field by the property fences and any significant or protected trees overhanging from adjacent parcels. (All trees protected by the City are included in the inventory.) Prepare a report of findings.

Gordon Mann, ISA Certified Arborist WE-0151AM, visited the property on Thursday, February 17, 2022, and ISA Certified Arborist Tom Stein, WE-12854A visited the property on Tuesday, February 22, 2022, to capture species identification, measurements of DBH and canopy, field condition notes, recommended actions, ratings, and approximate locations of the trees. A total of 116 trees were assessed on this property. Twenty eight (28) trees and 4 stumps are protected trees according to the City of Menlo Park ordinance and proposed for removal with mitigation. Sixty (60) trees are under protected size and proposed for removal with no mitigation required. Seventeen (17) trees are in poor condition and four (4) stumps and proposed for removal with diameter inch mitigation calculations. Seven (7) fair and better condition trees were appraised with the 10th Edition of the Guide for Plant Appraisal authored by the Council of Tree and Landscape Appraisers published by the ISA in 2019. sixteen (16) trees are proposed to be retained and protected on the site away from the solar panel locations. Eighteen trees were included in the initial inventory that will be removed and mitigated with the Entry Gate project and are not part of this project.

Gordon Mann re-visited the site on Wednesday, January 18, 2023, and confirmed the trees being removed by the Gate Entry Project, and there were trees that were removed, and some new tags needed to be put on trees.

The City of Menlo Park Municipal Code regulates both Street Trees and Heritage Trees. Chapter 13.20 of the Code defines a "Street Tree" as any woody perennial plant having a single main axis or stem commonly achieving 10 feet in height and capable of shaping and pruning to develop a branch-free trunk at least 9 feet in height, not including fruit

trees and vines. Includes any tree planted by the City, the owner or original developer that is accepted by the City as a street tree. Street trees are trees located in the area between the property line and the curb, valley gutter or edge of street pavement."

Chapter 13.24 of the Code defines a "Heritage Tree" as:

1. A tree or group of trees of historical significance, special character or community benefit, specifically designated by resolution of the city council;
2. An oak tree (*Quercus*) which is native to California and has a trunk with a circumference of 31.4 inches (diameter of 10 inches) or more, measured at 54 inches above natural grade. Trees with more than one trunk shall be measured at the point where the trunks divide, with the exception of trees that are under 12 feet in height, which will be exempt from this section.
3. All trees other than oaks which have a trunk with a circumference of 47.1 inches (diameter of 15 inches) or more, measured 54 inches above natural grade. Trees with more than one trunk shall be measured at the point where the trunks divide, with the exception of trees that are under 12 feet in height, which will be exempt from this section.

The vegetation found on site includes native and introduced plants. The area south of the parking lot is a grove of trees between the parking lot and the street frontage. The parking lot has trees planted in tree planting islands and trees are planted in planting spaces adjacent to the buildings.

METHODS

Appendix 1 and Appendix 2 in this report are the detailed inventory and recommendations for the trees. The following terms and Table A – Ratings Descriptions will further explain our findings.

Species of trees is listed by our local common name and botanical name by genus and species.

DBH (diameter breast high) is normally measured at 4'6" (54" above the average ground, height but if that varies due to characteristics on the trunk then the appropriate location where it was measured is noted. A steel diameter tape was used to measure the trees.

Canopy radius is measured in feet. It is the farthest extent of the crown composed of leaves and small twigs measured by a steel tape. This measurement often defines the Critical Root Zone (CRZ) or Protection Zone (PZ), which is a circular area around a tree with a radius equal to this measurement.

Actions listed are recommendations to improve health or structure of the tree. Trees in public spaces require maintenance. If a tree is to remain and be preserved, then the tree may need some form of work to reduce the likelihood of failure and increase the longevity of the tree. Preservation requirements and actions based on a proposed development plan are not included here.

Arborist Rating is subjective to condition and is based on both the health and structure of the tree. All of the trees were rated for condition, per the recognized national standard as set up by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) on a numeric scale of 5 (being the highest) to 0 (the worst condition, dead). The rating was done in the field at the time of the measuring and inspection.

Table A – Ratings Descriptions

No problem(s)	5	excellent

No apparent problem(s)	4	good
Minor problem(s)	3	fair
Major problem(s)	2	poor
Extreme problem(s)	1	hazardous, non-correctable
Dead	0	dead

Rating #0: This indicates a tree that has no significant sign of life.

Rating #1: The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a dangerous situation.

Rating #2: The tree has major problems. If the option is taken to preserve the tree, its condition could be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, fertilization, etc. If the recommended actions are completed correctly, hazard can be reduced and the rating can be elevated to a 3. If no action is taken the tree is considered a liability and should be removed.

Rating #3: The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated.

Rating #4: The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future hazard can be reduced and more serious health problems can be averted.

Rating #5: No problems found from a visual ground inspection. Structurally, these trees have properly spaced branches and near perfect characteristics for the species. Highly rated trees are not common in natural or developed landscapes. No tree is ever perfect especially with the unpredictability of nature, but with this highest rating, the condition should be considered excellent.

Notes indicate the health, structure and environment of the tree and explain why the tree should be removed or preserved. Additional notes may indicate if problems are minor, extreme or correctible.

Remove is the recommendation that the tree be removed. The recommendation will normally be based either on poor structure or poor health and is indicated as follows:

Yes H – Tree is unhealthy
Yes S – Tree is structurally unsound

OBSERVATIONS AND CONCLUSIONS

The site is a developed parking lot and building site combined with an open space located between the street frontage and the parking lot, and a new gate project is under construction which encroaches into the open space area and those trees have been subtracted from this project. There are utilities located in the open space area. Trees are growing in the landscaping around the building and in parking lot islands. The vegetation is comprised of native, ornamental, and introduced plants. All the trees in the project area were included. There were 116 trees included in the assessment. There were 25 Eucalyptus growing in the open space area, 20 Redwoods growing in the open space and landscape areas, 18 Coast Live Oak mostly in the open space area, 42 assorted other species including American Elm, Italian Stone Pine, Japanese Zelkova, and Aleppo Pine, and 8 stumps. The tree data is shown on the Solar Panel Installation 2900 Sand Hill Rd Menlo Park Tree List. The appraisal data for the 7 Fair condition and better trees is shown on the SHGCC Solar Project Appraised Value Tree List which is the CTLA 10th Edition TFT Appraisal Worksheet. The trees in poor condition were valued using the City of Menlo Park's diameter range valuation requirement. The calculations are shown on the SHGCC Solar Project Poor Condition Trees Mitigated by Diameter Inches Tree List. Four (4) of the 8 stumps which are of the protected size are included in the poor condition trees diameter inch mitigation calculations.

The initial inspection and tree inventory included trees that were inventoried by S.P. McClenahan for the Gate Entry Project. CalTLC received the Gate Entry Project arborist report and subtracted out the trees included in the Gate Entry Project so Sharon Height Golf and Country Club does not pay the mitigation twice for these removals.

PROPOSED TREE REMOVAL

There are 116 total trees. Twenty-eight trees are Heritage Trees proposed for removal, including 4 stumps that will be mitigated with the project. Of the remaining 24 trees, 7 are in Fair or better condition and 17 are in Poor condition. The 17 poor condition trees and 4 stumps were valued using Menlo Park's diameter inch mitigation process, totaling $15,600. The 7 trees in fair condition or better were appraised with a value of $17,100. The total mitigation amount is $32,700. There are 18 trees included in the inventory from the Front Gate Entry project, 17 removed and 1 protected tree off-site that are not part of this project and already mitigated.

There are 61 undersized unprotected trees proposed for removal with no required mitigation. There are 8 stumps included in the inventory and 4 are of protected size and included in the proposed diameter inch mitigation calculation. The planting mitigation for this project is proposed at $68,200, exceeding the required mitigation.

CONSTRUCTION IMPACT ASSESSMENT

This Arborist Report is intended to provide Sharon Heights Golf and Country Club and the City of Menlo Park, and other members of the development team a detailed *review* of the species, size, and current structure and vigor of the trees within and/or overhanging the proposed project area. At this time, we have reviewed the Site Plan provided by the Sharon Heights Golf and Tennis Club with the site visit. The perceived impacts are summarized below. Refer to Appendix 6 for protective measures to be taken for trees that will remain. Please note that the location of the utilities for the portable building were not shown on the site plan.

The trees are a combination of native, introduced, and landscape trees. The trees are growing in an open space area and the parking lot and landscape planters around the building. The proposed solar panels extend into the open space area on the south side of the parking lot. To achieve sun exposure the tall trees and trees that will shade the panels from the south and west need to be removed. There are 85 trees proposed for removal. There are 25 trees to be retained and protected. One tree to be retained is a Heritage Tree. These trees to be retained are mostly growing in landscape planter areas in the parking lot and around buildings on the north and east sides of the new solar panels.

The trees growing in the islands are not protected trees. The tree protection fencing will protect the soil within the planter islands and areas and will not need to extend to the drip lines if the drip lines are over asphalt or concrete. Because the islands are varying shapes and dimensions and the trees are not protected, the fencing should be orange plastic shaped to each planter area to be protected. If there is asphalt or concrete replacement, the pavement replacement should be the last step in the construction. This allows the trees to be protected by the fencing over the soil, the pavement is an excellent protection cover. The careful removal of the asphalt or concrete will not tear out roots. The paving area will be leveled, a geotextile fabric placed over the soil to achieve compaction, and final paving. The planter areas should not be reduced in size.

The trees to be removed are both in the footprint of the new panels or will obstruct the sun exposure on the new panels. The trees to be retained are outside of the panel area and do not shade the panels for maximum efficiency.

There should be landscape planting of small stature trees to restore the screen to the open space area between the property and the street access ramp. The landscape plan was not available at the time of the site inspection and the proposed planting will either provide the necessary mitigation for the Heritage Trees removed, or a payment of the in-lieu fee will be required.

DISCUSSION

Trees to be retained need to be protected from normal construction practices if they are to remain healthy and viable on the site. Our recommendations are based on experience, and City ordinance requirements, so as to enhance tree

longevity. This requires their root zones remain intact and viable, despite heavy equipment being on site, and the need to install foundations, driveways, underground utilities, and landscape irrigation systems. Simply walking and driving on soil has serious consequences for tree health.

Following is a summary of Impacts to trees during construction and Tree Protection measures that should be incorporated into the site plans in order to protect the trees. Once the plans are approved, they become the document that all contractors will follow. ***The plans become the contract between the owner and the contractor, so that only items spelled out in the plans can be expected to be followed. Hence, all protection measures, such as fence locations, mulch requirements and root pruning specifications must be shown on the plans.***

RECOMMENDATIONS: SUMMARY OF TREE PROTECTION MEASURES

Hire a Project Arborist to help ensure protection measures are incorporated into the site plans and followed. The Project Arborist should, in cooperation with the Engineers and/or Architects:

- Identify the Root Protection Zones on the final construction drawings, prior to bidding the project.
- Show the placement of tree protection fences, as well as areas to be irrigated, fertilized and mulched on the final construction drawings.
- Clearly show trees for removal on the plans and mark them clearly on site. A Contractor who is a Certified Arborist should perform tree and stump removal. All stumps within the root zone of trees to be preserved shall be ground out using a stump router or left in place. **No trunk within the root zone of other trees shall be removed using a backhoe or other piece of grading equipment**.
- Prior to any grading, or other work on the site that will come within 50’ of any tree to be preserved:
    1. Irrigate (if needed) and place a 3” layer of chip mulch over the protected root zone of all trees that will be impacted.
    2. Erect Tree Protection Fences. Place boards against trees located within 3’ of construction zones, even if fenced off.
    3. Remove lower foliage that may interfere with equipment PRIOR to having grading or other equipment on site. The Project Arborist should approve the extent of foliage elevation, and oversee the pruning, performed by a contractor who is an ISA Certified Arborist.
- For grade cuts, expose roots by hand digging, potholing or using an air spade and then cut roots cleanly prior to further grading outside the tree protection zones.
- For fills, if a cut is required first, follow as for cuts.
- Where possible, specify geotextile fabric and/or thickened paving, re-enforced paving, and structural soil in lieu of compacting, and avoid root cutting as much as possible, prior to placing fills on the soil surface. Any proposed retaining wall or fill soil shall be discussed with the engineer and arborist in order to reduce impacts to trees to be preserved.
- Clearly designate an area on the site outside the drip line of all trees where construction materials may be stored, and parking can take place. No materials or parking shall take place within the root zones of protected trees.
- Design utility and irrigation trenches to minimize disturbance to tree roots. Where possible, dig trenches with hydro-vac equipment or air spade, placing pipes underneath the roots, or bore the deeper trenches underneath the roots.
- Include on the plans an Arborist inspection schedule to monitor the site during (and after) construction to ensure protection measures are followed and make recommendations for care of the trees on site, as needed.

General Tree protection measures are included as Appendix 3. These measures need to be included on the Site, Grading, Utility and Landscape Plans. A final report of recommendations specific to the plan can be completed as part of, and in conjunction with, the actual plans. This will require the arborist working directly with the engineer and architect for the project. If the above recommendations are followed, the amount of time required by the arborist for the final report should be minim this will require the arborist working directly with the engineer and architect for the project. If the above recommendations are followed, the amount of time required by the arborist for the final report should be minimal.

All the retained trees in planting areas surrounded by concrete curb are minor impact. The Alleppo Pine 3056 on the adjacent property to the east is protected and will experience minor impact.

MITIGATION

In reference to Section 13.24.090(2), applicants may use the following monetary value of the replacement trees to help design their landscape plans for development-related removals:

- One (1) #5 container – $100
- One (1) #15 container – $200
- One (1) 24-inch tree box – $400
- One (1) 36-inch tree box – $1,200
- One (1) 48-inch tree box – $5,000
- One (1) 60-inch tree box – $7,000

Mitigation is required for the Heritage trees proposed to be removed appraised using the 10th Edition of the Guide for Plant Appraisal, and the poor trees proposed to be removed, using the Menlo Park diameter range replacement requirement. The appraised value of the 7 Fair condition trees and better was determined to be $17,100. The value of the 17 Poor condition trees and 4 stumps using the diameter range replacement requirement was determined to be $15,600. The total mitigation required is $32,700.

The initial planting plan showing the combination of trees and container sizes in the landscape design totaled $68,200 using the nursery stock size values in the above list.
The finalized proposed mitigation will either meet or exceed the mitigation requirement.

TREE SCHEDULE - REPLACEMENT VALUES ESTIMATED BY ARBORIST BASED ON CONTAINER SIZE

PLANT SCHEDULE RE						
TREES	CODE	BOTANICAL / COMMON NAME	CONT	QTY	UNIT COST	TOTAL
MT	MT	Melaleuca quinquenervia / Cajeput Tree Multi-Trunk	36"box	2	$200	$400
MT		Melaleuca quinquenervia / Cajeput Tree Multi-Trunk	48" box	9	$5,000	$45,000
MS	MS	Melaleuca styphelioides / Prickly Leaved Paperback	24"box	8	$400	$3,200
MS		Melaleuca styphelioides / Prickly Leaved Paperback	36"box	14	$1,200	$16,800
ME	ME	Metrosideros excelsa / New Zealand Christmas Tree	24"box	7	$400	$2,800
					TOTAL:	$68,200

The finalized proposed mitigation will either meet or exceed the mitigation requirement.

Please contact California Tree and Landscape Consulting, Inc. if there are any questions about the report or report data.

Report Prepared by:

Gordon Mann, Consulting Arborist and Urban Forester
International Society of Arboriculture Certified Arborist WE-0510AM
ISA Tree Risk Assessment Qualified American Society of Consulting Arborists
Registered Consulting Arborist #480

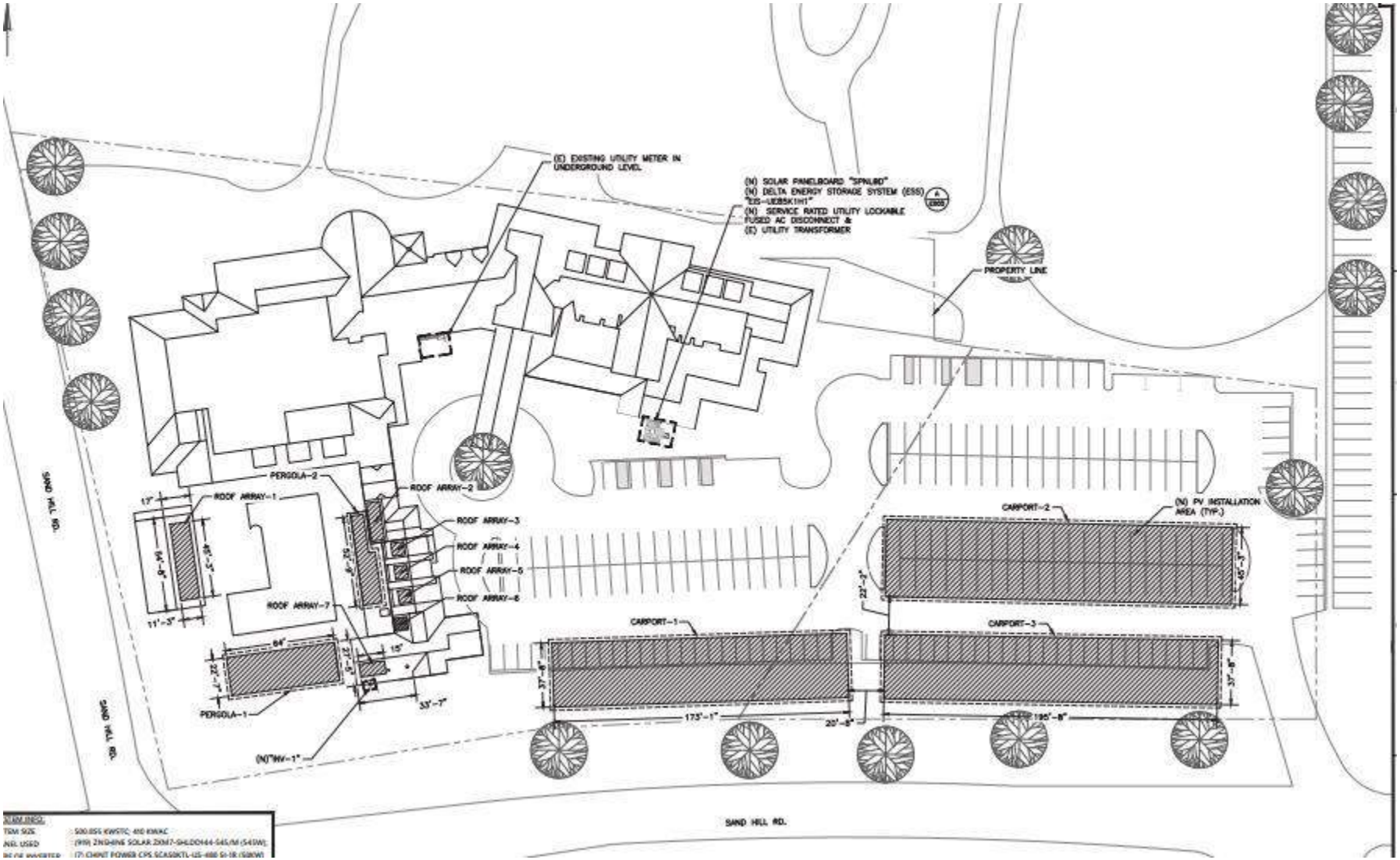
Enc.: Appendix 1 – Site Images and Site Plan
Appendix 2 – Tree List
Appendix 3 – Tree Value Data List
Appendix 4 – General Practices for Tree Protection
Appendix 5 – Images of Trees and Site
Appendix 6 – Tree Protection Exhibit and Specifications
Appendix 7 – Tree Replacement Plan
Appendix 8 – Terms

APPENDIX 1 – SITE IMAGES AND SITE PLAN

AERIAL IMAGE WITH TREES SHOWN BY TREE CONDITION AND TREE #S IN APPROXIMATE LOCATIONS ON SITE
DARK GREEN – GOOD, LIGHT GREEN – FAIR, ORANGE – POOR, RED - DEAD

AERIAL W TREES SHOWN BY TREE SPECIES AND TREE #S IN APPROXIMATE LOCATIONS

- Aleppo Pine (7)
- American Elm (28)
- Blue Gum eucalypt (28)
- Chinese pistache (2)
- Coast live oak (19)
- Coast redwood (20)
- Itailian stone pine (2)
- Japanese maple (2)
- Japanese zelkova
- Stump (8)


(E) EXISTING UTILITY METER IN UNDERGROUND LEVEL
(N) SOLAR PANELBOARD "SPNLBD"
(N) DELTA ENERGY STORAGE SYSTEM (ESS) "ESS-UE85K1H1"
(N) SERVICE RATED UTILITY LOCKABLE FUSED AC DISCONNECT &
(E) UTILITY TRANSFORMER
PROPERTY LINE
PERGOLA-2
ROOF ARRAY-1
ROOF ARRAY-2
ROOF ARRAY-3
ROOF ARRAY-4
ROOF ARRAY-5
ROOF ARRAY-6
ROOF ARRAY-7
CARPORT-1
CARPORT-2
CARPORT-3
(N) PV INSTALLATION AREA (TYP.)
PERGOLA-1
(N)"HV-1"
SAND HILL RD.

SITE PLAN

APPENDIX 2 – TREE DATA

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
1001	Coast redwood	Sequoia sempervirens	5	4.5	7	3 Fair - Minor Problems	45	Cable tight at 5'	Removed with gate entry project	N/A
1002	Stump	Stump	12	0.75		0 Dead	0	0	Removed prior to inspection, undersized	$0
1003	Stump	Stump	26.91	1		0 Dead	0	Euc, 18"&20"	Removed prior to inspection	$400
1008	Stump	Stump	14	1		Dead	0		Removed prior to inspection, undersized	$0
1010	Coast live oak	Quercus agrifolia	4	4.5	8	3 Fair - Minor Problems	45	2 clo in start of island W next to stalls	Remove, undersized	$0
1011	Stump	Stump	5, 6	1		0 Dead	0	2 pine stumps and several undersized clo, largest is 5.6" with low W lateral at 6" S of stumps	Removed prior to inspection, undersized	$0
1013	Stump	Stump	14, 5, 8	1		0 Dead	0	3 pine stumps 14, 5, 8", 9' from water valve to W	Removed prior to inspection , undersized	$0
1014	Stump	Stump	24, 18	4.5		0 Dead	0	Fallen pine & 2 pine stumps 24" & 18"	Removed prior to inspection	$600
1017	Stump	Stump	20, 22	4.5		0 Dead	0	2 pine stumps 22&20	Removed prior to inspection	$800

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SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condition Rating (%)	Observation Comments	Project Status	Appraised Value
1018	Stump	Stump	24, 13	4.5		0 Dead	0	Pine stumps 24&13"	Removed prior to inspection	$400
1018	Coast redwood	Sequoia sempervirens	4	4.5	5	2 Poor - Major Structure or Health Problems	30	Dieback	Remove, undersized	$0
1019	Coast redwood	Sequoia sempervirens	5	4.5	5	2 Poor - Major Structure or Health Problems	30	Dieback	Remove, undersized	$0
1020	Coast redwood	Sequoia sempervirens	3	4.5	4	3 Fair - Minor Problems	45	Under eucs	Remove, undersized	$0
3001	Coast redwood	Sequoia sempervirens	11.4	4.5	10	2 Poor - Major Structure or Health Problems	35	Cable girdling at 7'	Remove, undersized	$0
3502	Coast live oak	Quercus agrifolia	9.7	4.5	9	2 Poor - Major Structure or Health Problems	35	Stem bens at 12 inches and bends at 6' to the south,, below the road	Remove, undersized	$0
3004	Blue Gum Eucalypt	Eucalyptus globulus	31.5	1.5	22	2 Poor - Major Structure or Health Problems	35	Co dom at 18", included bark, against fence	Removed with gate entry project	N/A
3005	Blue Gum Eucalypt	Eucalyptus globulus	9.2	4.5	16	3 Fair - Minor Problems	45		Removed with gate entry project	N/A

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3006	Blue Gum Eucalypt	Eucalyptus globulus	7.1	4.5	14	3 Fair - Minor Problems	45	Normal flare, crowded	Removed with gate entry project	N/A
3007	Blue Gum Eucalypt	Eucalyptus globulus	11.5	4.5	17	2 Poor - Major Structure or Health Problems	30	Leans S, co dom at 11', crown mostly S	Removed with gate entry project	N/A
3008	Blue Gum Eucalypt	Eucalyptus globulus	32.5	4.5	28	2 Poor - Major Structure or Health Problems	40	Normal flare, Co dom at 10', small lateral in crotch	Removed with gate entry project	N/A
3009	Blue Gum Eucalypt	Eucalyptus globulus	35.4	4.5	30	2 Poor - Major Structure or Health Problems	25	Normal flare, trunk exuding kino, likely euc long horned beetle, 1-sided crown S, co dom at 24'	Removed with gate entry project	N/A
3010	Blue Gum Eucalypt	Eucalyptus globulus	14.1	4.5	18	2 Poor - Major Structure or Health Problems	40	N Leader cut at 30", bleeding on trunk	Remove, undersized	$0
3011	Blue Gum Eucalypt	Eucalyptus globulus	21.3	4.5	16	2 Poor - Major Structure or Health Problems	25	Just S of3010, bleeding on trunk, vertical crown	Remove, poor condition	$400
3012	Blue Gum Eucalypt	Eucalyptus globulus	8.4	4.5		1 Very Poor - Major Structure or Health Problems	20	Trunk wound W 0-4.4', two stems 5.2" & 5.7" just E of sign	Remove, undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3013	Blue Gum Eucalypt	Eucalyptus globulus	11	4.5	19	2 Poor - Major Structure or Health Problems	40	Co dom at 18', next to fence	Remove, undersized	$0
3014	Blue Gum Eucalypt	Eucalyptus globulus	7.1	4.5	8	2 Poor - Major Structure or Health Problems	30	Crowded, vertical growth, co dom at 10'	Remove, undersized	$0
3015	Blue Gum Eucalypt	Eucalyptus globulus	10.9	4.5	12	2 Poor - Major Structure or Health Problems	40	Crowded vertical growth, possibly topped at 10'	Remove, undersized	$0
3016	Blue Gum Eucalypt	Eucalyptus globulus	11.2	4.5	17	2 Poor - Major Structure or Health Problems	35	Crowded, bleeding on trunk, vertical growth	Remove, undersized	$0
3017	Blue Gum Eucalypt	Eucalyptus globulus	8.1	4.5	10	2 Poor - Major Structure or Health Problems	40	Vertical growth, crowded	Remove, undersized	$0
3018	Blue Gum Eucalypt	Eucalyptus globulus	18.34	4.5	22	2 Poor - Major Structure or Health Problems	35	2 stems at base, crowded, vertical growth	Remove, poor condition	$200
3019	Blue Gum Eucalypt	Eucalyptus globulus	21.6	4.5	18	2 Poor - Major Structure or Health Problems	35	Bleeding on trunk, co dom at 13', likely topped	Remove, poor condition	$400

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3020	Coast live oak	Quercus agrifolia	6.2	4.52	8	2 Poor - Major Structure or Health Problems	25	Leans S, kinks in trunk,	Remove, undersized	$0
3021	Blue Gum Eucalypt	Eucalyptus globulus	30.2	4.5	20	2 Poor - Major Structure or Health Problems	30	Low S lateral at 6', co dom at 8', crown leans S	Remove, poor condition	$1,200
3022	Blue Gum Eucalypt	Eucalyptus globulus	23.3	4.5	16	2 Poor - Major Structure or Health Problems	30	Co dom at 15', likely topped, 15'E of brick sign,	Remove, poor condition	$400
3023	Blue Gum eucalypt	Eucalyptus globulus	13.6	4.5	16	3 Fair - Minor Problems	45	Vertical, lean N, next to fence, 10' E of brick sign	Remove, undersized	$0
3024	Blue Gum Eucalypt	Eucalyptus globulus	22.8	4.5	27	2 Poor - Major Structure or Health Problems	30	Topped at 15', 3 co doms, end wts	Remove, poor condition	$400
3025	Blue Gum Eucalypt	Eucalyptus globulus	25.9	4.5	18	2 Poor - Major Structure or Health Problems	30	Topped at 15', end wts, behind ctr of brick sign	Remove, poor condition	$400
3026	Aleppo Pine	Pinus halepensis	11.5	4.5	17	2 Poor - Major Structure or Health Problems	30	Dieback, leans SW, touching 3027	Remove, undersized	$0
3027	Blue Gum Eucalypt	Eucalyptus globulus	21.4	4.5	19	1 Very Poor - Major Structure or Health Problems	20	Topped at 12', growing against 3026	Remove, poor condition	$400

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condition Rating (%)	Observation Comments	Project Status	Appraised Value
3028	Blue Gum Eucalypt	Eucalyptus globulus	12.7	4.5	14	2 Poor - Major Structure or Health Problems	30	Co dom at 16', likely topped, 3-5" eucalyptus NE, E, & SW of stem	Remove, undersized	$0
3029	Blue Gum Eucalypt	Eucalyptus globulus	30.8	4.5	26	2 Poor - Major Structure or Health Problems	25	Topped at 10', short for diameter, low N lateral	Remove, poor condition	$1,200
3030	Blue Gum Eucalypt	Eucalyptus globulus	33.41	4.5	32	2 Poor - Major Structure or Health Problems	35	Vertical growth, end wts	Remove, poor condition	$1,200
3502	Coast live oak	Quercus agrifolia	9.3	4.5	9	2 Poor - Major Structure or Health Problems	35	Cable girdling atg6'	Remove, undersized	$0
3031	Aleppo Pine	Pinus halepensis	20.3	3.5	15	2 Poor - Major Structure or Health Problems	25	Leans S 45 deg, co dom at 5', dieback	Remove, poor condition	$400
3032	Blue Gum Eucalypt	Eucalyptus globulus	18.29	4.5	17	2 Poor - Major Structure or Health Problems	40	2 stems at base, vertical growth, close to fence	Remove, poor condition	$200
3033	Aleppo Pine	Pinus halepensis	13.2	4.5	8	2 Poor - Major Structure or Health Problems	35	Leans S 30 deg, dieback	Remove, undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3034	Blue Gum Eucalypt	Eucalyptus globulus	26.5	4.5	29	2 Poor - Major Structure or Health Problems	40	Co dom at 15', end wts 2 spaces before end of parking stalls,,, re-align all in office	Remove, poor condition	$400
3035	Blue Gum Eucalypt	Eucalyptus globulus	49.3	4.5	28	2 Poor - Major Structure or Health Problems	25	Topped at 15', 4 leaders vertical growth, next to fence in second to last stall of parking spaces	Remove, poor condition	$5,000
3036	Aleppo Pine	Pinus halepensis	14.4	4.5	17	1 Very Poor - Major Structure or Health Problems	20	Leans SW at >45deg, dieback,	Remove, undersized	$0
3037	Itailian stone pine	Pinus pinea	23.2	4.5	19	2 Poor - Major Structure or Health Problems	30	Leans S 45 deg, , dieback, co dom at 25' in alignment with redwoods in parking lot	Remove, poor condition	$400
3038	Coast live oak	Quercus agrifolia	8.2	1.5	10	2 Poor - Major Structure or Health Problems	40	Co dom at 3', crowded branching, next to horizontal pine stump to NW	Remove, undersized	$0
3039	Coast live oak	Quercus agrifolia	14.7	4.5	18	3 Fair - Minor Problems	45	Co dom at 10', leans over road 15 deg, at top of road grade	Remove, mitigate appraised value	$2,700
3040	Coast live oak	Quercus agrifolia	8.5	4.5	12	3 Fair - Minor Problems	45	At top of grade off road, in crown on image, adjust location, in alignment with redwoods in parking lotunder pine	Remove, undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3041	Itailian stone pine	Pinus pinea	26.9	4.5		1 Very Poor - Major Structure or Health Problems	15	Old tag 48, curving trunk leans SW, co dom at 15', end wts (all leaning pines have excessive end wts)	Remove, poor condition	$400
3042	Coast live oak	Quercus agrifolia	13.1	4.5	18	4 Good - No Apparent Problems	65	On level ground, symmetric end wt N laterals	Remove, mitigate appraised value	$3,000
3043	Coast live oak	Quercus agrifolia	9.9	4.5	14	3 Fair - Minor Problems	50	Slight lean S, in flat ground align with light pole	Remove, undersized	$0
3044	Coast live oak	Quercus agrifolia	10	4.5	14	4 Good - No Apparent Problems	65	In flat ground next to 2 pine stumpps	Remove, mitigate appraised value	$1,800
3045	Coast live oak	Quercus agrifolia	14	4.5	19	4 Good - No Apparent Problems	65	S of pine stump, align with peak on Bldg, just E	Remove, mitigate appraised value	$3,400
3046	Coast live oak	Quercus agrifolia	8.2	4.5	13	3 Fair - Minor Problems	55	In flat area, low N lateral, close to co dom at 6'	Remove, undersized	$0
3047	Coast live oak	Quercus agrifolia	6.2	4.5	9	3 Fair - Minor Problems	50	Co doms at 5'	Remove, undersized	$0
3048	Coast live oak	Quercus agrifolia	6.3	4.5	11	4 Good - No Apparent Problems	65	Next to pine stump to S, co dom at 15'	Remove, undersized	$0
3049	Coast live oak	Quercus agrifolia	8.4	2	13	2 Poor - Major Structure or Health Problems	45	Co dom at 3', next to stump to W	Remove, undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condition Rating (%)	Observation Comments	Project Status	Appraised Value
3050	Coast live oak	Quercus agrifolia	14	1.5	19	3 Fair - Minor Problems	45	On grade with road, co dom at 2',	Remove, mitigate appraised value	$2,500
3051	Aleppo Pine	Pinus halepensis	20.6	4.5	20	2 Poor - Major Structure or Health Problems	20	70 deg lean towards road, next to water meter box & valve & backflow	Remove, poor condition	$400
3052	Coast live oak	Quercus agrifolia	11.4	4.5	16	3 Fair - Minor Problems	55	Next to opening, low N lateral at 42", symmetrical	Remove, mitigate appraised value	$1,600
3053	Coast live oak	Quercus agrifolia	6.7	4.5	14	3 Fair - Minor Problems	50	On grade with road, farthest W tree	Remove, undersized	$0
3054	Coast live oak	Quercus agrifolia	9.9	4.5	11	2 Poor - Major Structure or Health Problems	40	At road grade, co dom at 6", 2 stems measured,	Remove, undersized	$0
3055	Aleppo Pine	Pinus halepensis	7.8	4.5	7	3 Fair - Minor Problems	50	Just down slope from road	Remove, undersized	$0
3056	Aleppo Pine	Pinus halepensis	22.63	4.5	18	3 Fair - Minor Problems	60	Codom at 4 feet above grade with included bark. Sparse lower canopy. On adjacent property extending into project	Retain and Protect	N/A
3057	American Elm	Ulmus americana	5	4.5	8	3 Fair - Minor Problems	60	Slightly in south east. Out of balance south east. 2 feet west of walkway.	Remove, undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3058	American Elm	Ulmus americana	5	4.5	11	3 Fair - Minor Problems	60	Branching out 6 feet to three stems with included bark. NP interfering with Aleppo pine 3056.	Removed with gate entry project	N/A
3059	American Elm	Ulmus americana	4	4.5	9	3 Fair - Minor Problems	60	Codominant branching at five and 6 feet with included barge. Slight mean west. Upper canopy growing into Aleppo pine number 3056.	Removed with gate entry project	N/A
3060	American Elm	Ulmus americana	5	4.5	7	3 Fair - Minor Problems	60	Slightly in west. Codom on a branching at 5 feet in the three stems with included bark. Upper canopy growing into Aleppo pine number 3056.	Removed with gate entry project	N/A
3060	American Elm	Ulmus americana	5	4.5	7	3 Fair - Minor Problems	60	Codominant branching 5 feet into three stems with included bark. Upper canopy growing into Aleppo pine number 3056.	Removed with gate entry project	N/A
3061	American Elm	Ulmus americana	7	4.5	14	3 Fair - Minor Problems	55	Codominant branching in 7 feet with included in bark. Located about 7 feet north east of curb.	Removed with gate entry project	N/A

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3062	American Elm	Ulmus americana	6	4.5		3 Fair - Minor Problems	60	Slightly in west. Codominant branching at 67 feet with included bark. Growing 4 feet from entry sign.	Removed with gate entry project	N/A
3063	American Elm	Ulmus americana	5	4.5		3 Fair - Minor Problems	60	Codominant branching 7 feet above grade with included bark.	Removed with gate entry project	N/A
3064	American Elm	Ulmus americana	6	4.5	12	3 Fair - Minor Problems	60	Kurama branching at 6 feet above grade with included bark. One sided west. Growing 6 feet east parking curb.	Removed with gate entry project	N/A
3066	American Elm	Ulmus americana	6	4.5	9	3 Fair - Minor Problems	60	Growing in planter 6 feet west of curb. Codominant branching at 7 feet into three branches with included bark. Upper canopy growing into light.	Remove, undersized	$0
3067	American Elm	Ulmus americana	6	4.5	12	3 Fair - Minor Problems	60	'Growing in planter 6 feet west of curb. Codominant branching at 7 feet into three stems with including bark.	Remove, undersized	$0
3068	American Elm	Ulmus americana	5	4.5	8	3 Fair - Minor Problems	60	Growing in planter 4 feet west of curb. Codominant branching at 7 feet. Pruned branches hanging. Slightly in West.	Removed with gate entry project	N/A

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3069	American Elm	Ulmus americana	4	4.5	6	3 Fair - Minor Problems	60	Growing in planter 3 feet west of curb. Slightly in West. Call Dominic Brian Chinn at 7 feet with included bark.	Removed with gate entry project	N/A
3070	American Elm	Ulmus americana	4	4.5	6	3 Fair - Minor Problems	60	Growing in 3 x 3' planter. Mechanical moon northside from one to 2 feet above grade partially calloused. Codominant branch in 7 feet above grade would include bar.	Retain and protect	$0
3071	American Elm	Ulmus americana	4	4.5	5	3 Fair - Minor Problems	60	Growing in 3 x 3' planter. Call domino branching 7 feet above grade with included bark.	Remove , undersized	$0
3072	American Elm	Ulmus americana	5	4.5	6	3 Fair - Minor Problems	60	-Growing in 3 x 3' planter. Codominant branching 7 feet above grade.	Remove , undersized	$0
3073	American Elm	Ulmus americana	5	4.5	5	2 Poor - Major Structure or Health Problems	30	'Growing in 3 x 3 planter. Mechanical wound south west side from 1 to 5 feet above grade. Proximately 1/4 of cambium is affected. Partially calloused. Shedding bark. Codominant branching at 7 feet above grade.	Retain and protect	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3074	American Elm	Ulmus americana	4	4.5	4	3 Fair - Minor Problems	60	Growing in 3 x 3' planter. Codominant Brian Chinn 7 feet above grade with included bark.	retain and protect	$0
3075	American Elm	Ulmus americana	4	4.5	6	3 Fair - Minor Problems	60		Remove , undersized	$0
3076	Chinese pistache	Pistacia chinensis	4	4.5	4	3 Fair - Minor Problems	25	Growing in planter 3 feet west parking curb. Moderate lean Southwest. Exfoliating bark. Central liter topped at 7 feet above grade. Crossing branches.	Remove , undersized	$0
3077	American Elm	Ulmus americana	4	4.5	7	3 Fair - Minor Problems	60	Growing in planter proximately 4 feet from parking curbs. Codominant branching 7 feet above grade.	Retain and protect	$0
3078	American Elm	Ulmus americana	5	4.5	8	3 Fair - Minor Problems	60	Growing in planter proximately 3 feet from parking curb. Call diameter branching 7 feet above grade with included park.	Retain and protect	$0
3079	American Elm	Ulmus americana	7	4.5	9	3 Fair - Minor Problems	60	Implanter proximately five W. of parking curb. Codominant branching 7 feet above grade with included bar.	Retain and protect	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3080	American Elm	Ulmus americana	9	4.5	1	3 Fair - Minor Problems	65	. Growing in planter approximately 5 feet east of parking curb. Odometer branching 7 feet above grade into three stems with included work. Partially callous pruning moon outside 6 feet above grade no decay.	Retain and protect	$0
3081	Chinese pistache	Pistacia chinensis	5	4.5	6	3 Fair - Minor Problems	60	Growing in planters 3 feet west of parking curb. Codominant branching at 5 feet into five stems. Small amount of exfoliating bark southwest side.	retain and protect	$0
3082	Coast redwood	Sequoia sempervirens	12	4.5		3 Fair - Minor Problems	60	Growing in planter proximately 4 feet from parking curb on two sides. Prune for clearance. Growing in a group of three redwoods.	Remove , undersized	$0
3083	Coast redwood	Sequoia sempervirens	11	4.5	10	3 Fair - Minor Problems	60	'Growing in planter proximately 4 feet from parking curb on two sides. Growing in a group of three redwoods. Clarence prune.	Remove , undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3084	Coast redwood	Sequoia sempervirens	12	4.5	12	3 Fair - Minor Problems	60	Growing in group of three redwoods. Approximately 12 feet from parking curbs on east and west sides.	Remove , undersized	$0
3085	Japanese zelkova	Zelkova serrata	13.45	4.5	20	2 Poor - Major Structure or Health Problems	45	3 stems at base, 6,8,9"; Branches at grade. Growing 10 feet south of parking curb. Two clumps of mistletoe in mid canopy.	Remove , undersized	$0
3086	American Elm	Ulmus americana	12	4.5	18	3 Fair - Minor Problems	60	Growing 4 feet from Park Street. 5 feet from the building. Codominant branching 7 to 8 feet above grade in the multiple stems	Retain and protect	$0
3087	Japanese maple	Acer palmatum	12	4.5	9	3 Fair - Minor Problems	60	DVH estimated at grade. Branches at grade into five stems. Growing for the north of parking curb. 12 feet south of the building.	Retain and protect	$0
3088	American Elm	Ulmus americana	9	4.5	15	3 Fair - Minor Problems	60	Growing in planter approximately 8 feet from parking strip. Codominant branching 6 feet above grade into three stems with included bark.	Retain and protect	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3090	American Elm	Ulmus americana	12	4.5	25	3 Fair - Minor Problems	60	Exposed route to West for 5 feet. On slight slope. DLR estimated towards building. Codom in Branson 6 feet above grade into for stems with included bark.	Remove , undersized	$0
3089	Japanese maple	Acer palmatum	12	0.1		3 Fair - Minor Problems	60	Growing in planter 2 feet from walkway. DBH is estimated at grade branches just above grade into approximately seven stems. Reduction pruning throughout.	Retain and protect	$0
3091	American Elm	Ulmus americana	9	4.5	18	3 Fair - Minor Problems	60	Growing on slope approximately 15 feet south of walkway. Codom is branching at 7 feet above grade with included bark twisting crossing branches grafted together at 7 feet above grade southside.	Remove , undersized	$0
3092	American Elm	Ulmus americana	7	4.5	18	3 Fair - Minor Problems	60	Growing 1 foot south of walkway. DLR is estimated over building. Codominant branching 5 feet above grade with included bar three stems. Suppressed on south side by Jason trees. Slightly in north.	Remove , undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
3093	Coast redwood	Sequoia sempervirens	13	4.5	12	3 Fair - Minor Problems	60	'Growing top of slope. 4 feet north of wire fence. In Grove of redwoods.	Remove , undersized	$0
3094	Coast redwood	Sequoia sempervirens	12	4.5	14	3 Fair - Minor Problems	60	Growing mid slow, in Grove of redwoods. Clearance pruned northside.	Remove , undersized	$0
3095	Coast redwood	Sequoia sempervirens	11	4.5	10	3 Fair - Minor Problems	50	Growing 8 feet south of walkway. Sparsemid- canopy.	Remove , undersized	$0
3096	Coast redwood	Sequoia sempervirens	10	4.5	16	3 Fair - Minor Problems	50	-Growing mid slope. 12 feet south of walkway. Growing in grove of redwoods.	Remove , undersized	$0
3097	Coast redwood	Sequoia sempervirens	11	4.5	11	2 Poor - Major Structure or Health Problems	25	Growing mid slope. Approximately 50 to 60% necrotic foliage. Spars canopy. Drought stressed.	Remove , undersized	$0
3098	Coast redwood	Sequoia sempervirens	7	4.5	6	0 Dead	0	Standing dead. Recommendations remove. 8 feet from wire fence.	Remove , undersized	$0
3099	Coast redwood	Sequoia sempervirens	1	4.5	2	2 Poor - Major Structure or Health Problems	30	Growing 15 feet south of parking curb. Mid slope. Drought stressed.	Remove , undersized	$0
3100	Coast redwood	Sequoia sempervirens	5	4.5	9	3 Fair - Minor Problems	60	Growing 3 feet north of wire fence. 20 feet south parking curb.	Remove , undersized	$0

SHGCC Solar Project Tree List

Tree #	Common Name	Latin Name	DBH (in)	Ht Dia Meas at (ft)	Crown Radius (ft)	Condition	Condi-tion Rating (%)	Observation Comments	Project Status	Appraised Value
9590	Coast Redwood	Sequoia sempervirens	16	4.5	11	3 Fair - Minor Problems	60	Located 12 feet south of parking curb mid slope.	Remove, mitigate appraised	$2,100
9591	Coast redwood	Sequoia sempervirens	11	4.5	10	3 Fair - Minor Problems	60	Growing near top of slope 3 feet north of wire fence. 22 feet south of parking curb. Basal sprouting.	Remove , undersized	$0
9592	Coast redwood	Sequoia sempervirens	8	4.5	8	3 Fair - Minor Problems	60	Growing top of slope 3 feet north of fence and 28 feet south of parking curb. Suppressed Southside by Coast Live Oak.	Remove , undersized	$0
Total 116 entries in Inventory; 98 trees in soolar project, 18 trees in Gate Entry Project; 28 Eucalyptus, 21 Redwoods, 18 Coast Live Oak, 42 other species, and 8 stumps. Total Mitigation Fair trees $17,100; Total Mitigation Poor condition trees $15,600; Total Mitigation Fee $32,700										$32,700

Key / # trees	Description
7	Fair condition trees removed with appraised value mitigation
21	Poor condition trees with diameter inch mitigation & 4 stumps
60	undersized trees no mitigation required & 4 stumps
12	Retain and Protect
17/1	17 Trees removed with Gate Entry Project, already mitigated/ 1 offsite

APPENDIX 3 – TREE VALUE DATA

FAIR AND BETTER CONDITION TREES APPRAISED BY 10TH EDITION TFT

SHGCC Solar Project Appraised Value
Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condition rating	functional limitation	external limitation	nursery group	nursery trunk dia (in.)	nursery x-sect area (sq. in)	replacement species	replcmt tree cost (24" box)	unit tree cost ($/sq. in.)	basic reproduction cost ($)	Depreciated reproduction cost ($)	Depreciated rep. cost rounded to $100	Reason for Removal
3039	Coast live oak	14.7	169.63	0.5	0.6	0.8	3	2.20	3.80	Coast live oak	252.63	66.48	$11,277.31	$2,706.56	$2,700	Development
3042	Coast live oak	13.1	134.71	0.7	0.6	0.8	3	2.20	3.80	Coast live oak	252.63	66.48	$8,955.99	$3,009.21	$3,000	Development
3044	Coast live oak	10	78.50	0.7	0.6	0.8	3	2.20	3.80	Coast live oak	252.63	66.48	$5,218.80	$1,753.52	$1,800	Development
3045	Coast live oak	14	153.86	0.7	0.6	0.8	3	2.20	3.80	Coast live oak	252.63	66.48	$10,228.86	$3,436.90	$3,400	Development
3050	Coast live oak	14	153.86	0.5	0.6	0.8	3	2.20	3.80	Coast live oak	252.63	66.48	$10,228.86	$2,454.93	$2,500	Development
3052	Coast live oak	11.4	102.02	0.5	0.6	0.8	3	2.20	3.80	Coast live oak	252.63	66.48	$6,782.36	$1,627.77	$1,600	Development
9590	Coast redwood	16	200.96	0.5	0.5	0.8	4	2.46	4.75	Coast redwood	252.63	53.19	$10,688.11	$2,137.62	$2,100	Development
Total 7 trees fair or better condition trees, appraised mitigation, total mitigation $17,100															$17,100	

POOR AND WORSE CONDITION TREES APPRAISED BY MENLO PARK DIAMETER INCH MITIGATION

SHGCC Solar Project Poor Condition Trees Mitigated by Diameter Inches
Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replacement species	Diameter Mitigation Calculation
1003	Stump	26.91	568.46	0.3	0.25	0.35	4	2.46	4.75	unknown	$400
1014	Stump	24, 18	#VALUE!	0.3	0.25	0.35	4	2.46	4.75	unknown	$600
1017	Stump	20, 22	#VALUE!	0.3	0.45	0.35	4	2.46	4.75	unknown	$800
1018	Stump	24, 13	#VALUE!	0.3	0.25	0.35	4	2.46	4.75	unknown	$400
3011	Blue Gum Eucalypt	21.3	356.15	0.3	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$400
3018	Blue Gum Eucalypt	18.34	264.04	0.3	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$200
3019	Blue Gum Eucalypt	21.6	366.25	0.3	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$400
3021	Blue Gum Eucalypt	30.2	715.95	0.1	0.45	0.35	4	2.46	4.75	Blue Gum Eucalypt	$1,200
3022	Blue Gum Eucalypt	23.3	426.17	0.3	0.45	0.35	2	1.69	2.24	Blue Gum Eucalypt	$400
3024	Blue Gum Eucalypt	22.8	408.07	0.3	0.45	0.35	4	2.56	4.75	Blue Gum Eucalypt	$400
3025	Blue Gum Eucalypt	25.9	526.59	0.3	0.45	0.35	4	2.46	4.75	Blue Gum Eucalypt	$400
3027	Blue Gum Eucalypt	21.4	359.50	0.3	0.45	0.35	4	2.46	4.75	Blue Gum Eucalypt	$400
3029	Blue Gum Eucalypt	30.8	744.68	0	0.45	0.35	4	2.46	4.75	Blue Gum Eucalypt	$1,200

SHGCC Solar Project Poor Condition Trees Mitigated by Diameter Inches
Tree List

Tree #	species	trunk dia. (in.)	x-sect area (sq. in.)	condi-tion rating	func-tional limita-tion	extern-al limita-tion	nurs-ery group	nurs-ery trunk dia (in.)	nurs-ery x-sect area (sq. in)	replacement species	Diameter Mitigation Calculation
3030	Blue Gum Eucalypt	33.41	876.24	0.3	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$1,200
3031	Blue Gum Eucalypt	20.3	323.49	0.3	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$400
3032	Blue Gum Eucalypt	18.29	262.60	0	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$200
3034	Blue Gum Eucalypt	26.5	551.27	0.3	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$400
3035	Blue Gum Eucalypt	49.3	1907.93	0.3	0.25	0.35	4	2.46	4.75	Blue Gum Eucalypt	$5,000
3037	Itailian Stone Pine	23.2	422.52	0.3	0.25	0.35	4	2.46	4.75	Itailian Stone Pine	$400
3041	Itailian Stone Pine	26.9	568.03	0.3	0.25	0.35	4	2.46	4.75	Itailian Stone Pine	$400
3051	Aleppo Pine	20.6	333.12	0.1	0.25	0.35	4	2.46	4.75	Aleppo Pine	$400
21 tree entries, 17 poor condition trees and 4 stumps, mitigated by diameter size, Total mitigation of $15,600.											$15,600

4	stumps
17	Poor Condition trees

APPENDIX 4 – GENERAL PRACTICES FOR TREE PROTECTION

Definitions:

Root zone: The roots of trees grow fairly close to the surface of the soil, and spread out in a radial direction from the trunk of tree. A general rule of thumb is that they spread 2 to 3 times the radius of the canopy, or 1 to 1 ½ times the height of the tree. It is generally accepted that disturbance to root zones should be kept as far as possible from the trunk of a tree.

Inner Bark: The bark on large valley oaks and coast live oaks is quite thick, usually 1" to 2". If the bark is knocked off a tree, the inner bark, or cambial region, is exposed or removed. The cambial zone is the area of tissue responsible for adding new layers to the tree each year, so by removing it, the tree can only grow new tissue from the edges of the wound. In addition, the wood of the tree is exposed to decay fungi, so the trunk present at the time of the injury becomes susceptible to decay. Tree protection measures require that no activities occur which can knock the bark off the trees.

Methods Used in Tree Protection:

No matter how detailed Tree Protection Measures are in the initial Arborist Report, they will not accomplish their stated purpose unless they are applied to individual trees and a Project Arborist is hired to oversee the construction. The Project Arborist should have the ability to enforce the Protection Measures. The Project Arborist should be hired as soon as possible to assist in design and to become familiar with the project. He must be able to read and understand the project drawings and interpret the specifications. He should also have the ability to cooperate with the contractor, incorporating the contractor's ideas on how to accomplish the protection measures, wherever possible. It is advisable for the Project Arborist to be present at the Pre-Bid tour of the site, to answer questions the contractors may have about Tree Protection Measures. This also lets the contractors know how important tree preservation is to the developer.

Root Protection Zone (RPZ): Since in most construction projects it is not possible to protect the entire root zone of a tree, a Root Protection Zone is established for each tree to be preserved. The minimum Root Protection Zone is the area underneath the tree's canopy (out to the dripline, or edge of the canopy), plus 10'. The Project Arborist must approve work within the RPZ.

Irrigate, Fertilize, Mulch: Prior to grading on the site near any tree, the area within the Tree Protection fence should be fertilized with 4 pounds of nitrogen per 1000 square feet, and the fertilizer irrigated in. The irrigation should percolate at least 24 inches into the soil. This should be done no less than 2 weeks prior to grading or other root disturbing activities. After irrigating, cover the RPZ with at least 12" of leaf and twig mulch. Such mulch can be obtained from chipping or grinding the limbs of any trees removed on the site. Acceptable mulches can be obtained from nurseries or other commercial sources. Fibrous or shredded redwood or cedar bark mulch shall not be used anywhere on site.

Fence: Fence around the Root Protection Zone and restrict activity therein to prevent soil compaction by vehicles, foot traffic or material storage. The fenced area shall be off limits to all construction equipment, unless there is express written notification provided by the Project Arborist, and impacts are discussed and mitigated prior to work commencing.

> No storage or cleaning of equipment or materials, or parking of any equipment can take place within the fenced off area, known as the RPZ.

The fence should be highly visible, and stout enough to keep vehicles and other equipment out. I recommend the fence be made of orange plastic protective fencing, kept in place by t-posts set no farther apart than 6'.

In areas of intense impact, a 6' chain link fence is preferred.

In areas with many trees, the RPZ can be fenced as one unit, rather than separately for each tree.

Where tree trunks are within 3' of the construction area, place 2" by 4" boards vertically against the tree trunks, even if fenced off. Hold the boards in place with wire. Do not nail them directly to the tree. The purpose of the boards is to protect the trunk, should any equipment stray into the RPZ.

Existing Asphalt and Concrete: Existing asphalt pavement and concrete on a site already may have roots growing under the pavement, and if the pavement is left in place, the roots are protected from disturbance. Instead of fencing to the drip line over the pavement, the fencing can be placed at the edge of the pavement to protect the soil adjacent to the pavement.

If the pavement is going to be removed, and it cannot be retained until the end of the project, once the pavement is removed, fencing shall be placed over the soil to protect the soil from compaction to the entire area of the protected root zone. If encroachment into the root zone is approved, mulch shall be placed over the soil and the fencing shall either be placed protect the remain ing portion of the root zone or left in place protecting the entire root zone and only entered to perform the approved work. The approved work in the tree protection zone will be the determining factor in the fence placement and entry into the protected area.

Elevate Foliage: Where indicated, remove lower foliage from a tree to prevent limb breakage by equipment or in conflict with a proposed structure. Low foliage as specified for pruning can usually be removed without harming the tree. The specifications should limit the amount of foliage to a maximum of 25%, unless the arborist demonstrates the need to remove a greater amount. Branches need to be removed at the anatomically correct location in order to reduce decay organisms from entering the trunk. For this reason, a contractor who is an ISA Certified Arborist should perform all pruning on protected trees.[1]

Expose and Cut Roots: Breaking roots with a backhoe, or crushing them with a grader, causes significant injury, which may subject the roots to decay. Ripping roots may cause them to splinter toward the base of the tree, creating much more injury than a clean cut would make. At any location where the root zone of a tree will be impacted by a trench or a cut (including a cut required for a fill and compaction), the roots shall be exposed with either a backhoe digging radially to the trunk, by hand digging, or by a hydraulic air spade, and then cut cleanly with a sharp instrument, such as chainsaw with a carbide chain. Once the roots are severed, the area behind the cut should be moistened and mulched. A root protection fence should also be erected to protect the remaining roots, if it is not already in place. Further grading or backhoe work required outside the established RPZ can then continue without further protection measures.

Protect Roots in Deeper Trenches: The location of utilities on the site can be very detrimental to trees. Design the project to use as few trenches as possible, and to keep them away from the major trees to be protected. Wherever possible, in areas where trenches will be very deep, consider boring under the roots of the trees, rather than digging the trench through the roots. This technique can be quite useful for utility trenches and pipelines.

[1] International Society of Arboriculture (ISA), maintains a program of Certifying individuals. Each ISA Certified Arborist has a number and must maintain continuing education credits to remain Certified.

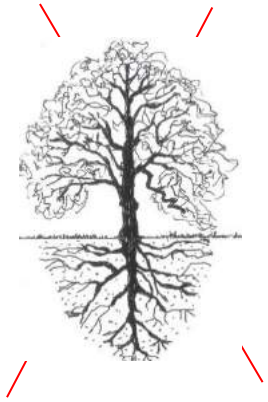
Protect Roots in Small Trenches: After all construction is complete on a site, it is not unusual for the landscape contractor to come in and sever a large number of "preserved" roots during the installation of irrigation systems. The Project Arborist must therefore approve the landscape and irrigation plans. The irrigation system needs to be designed so the main lines are located outside the root zone of major trees, and the secondary lines are either laid on the surface (drip systems), or carefully dug with a hydraulic or air spade, and the flexible pipe fed underneath the major roots.

Design the irrigation system so it can slowly apply water (no more than ¼" to ½" of water per hour) over a longer period of time. This allows deep soaking of root zones. The system also needs to accommodate infrequent irrigation settings of once or twice a month, rather than several times a week.

Monitoring Tree Health During and After Construction: The Project Arborist should visit the site at least twice a month during construction to be certain the tree protection measures are being followed, to monitor the health of impacted trees, and make recommendations as to irrigation or other needs. After construction is complete, the arborist should monitor the site monthly for one year and make recommendations for care where needed. If longer term monitoring is required, the arborist should report this to the developer and the planning agency overseeing the project.

Root Structure

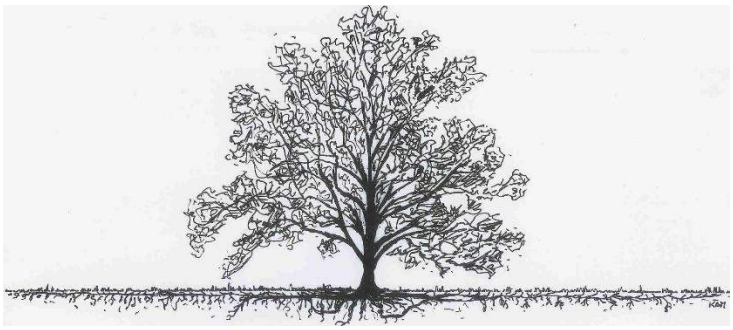
The majority of a tree's roots are contained in a radius from the main trunk outward approximately two to three times the canopy of the tree. These roots are located in the top 6" to 3' of soil. It is a common misconception that a tree underground resembles the canopy (see Drawing A below). The correct root structure of a tree is in Drawing B. All plants' roots need both water and air for survival. Surface roots are a common phenomenon with trees grown in compacted soil. Poor canopy development or canopy decline in mature trees is often the result of inadequate root space and/or soil compaction.



Drawing A

Common misconception of where roots are assumed to be located

tree



Drawing B

The reality of where roots are generally located

Structural Issues

Limited space for canopy development produces poor structure in trees. The largest tree in a given area, which is 'shading' the other trees is considered Dominant. The 'shaded' trees are considered Suppressed. The following picture illustrates this point. Suppressed trees are more likely to become a potential hazard due to their poor structure.

Suppressed Tree

Canopy weight all to one side

Limbs and foliage

Dominant Tree

Growth is upright

Canopy is balanced by limbs and foliage equally

Co-dominant leaders are another common structural problem in trees.

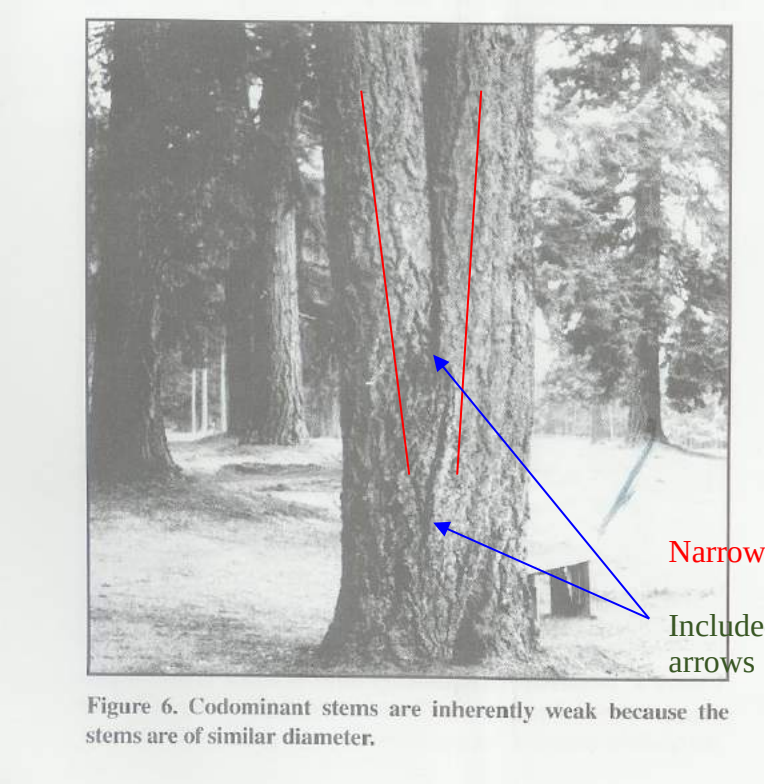


Figure 6. Codominant stems are inherently weak because the stems are of similar diameter.

The tree in this picture has a co-dominant leader at about 3' and included bark up to 7 or 8'. Included bark occurs when two or more limbs have a narrow angle of attachment resulting in bark between the stems – instead of cell to cell structure. This is considered a critical defect in trees and is the cause of many failures.

Narrow Angle

Included Bark between the arrows

Photo from Evaluation of Hazard Trees in Urban Areas by Nelda P. Matheny and James R. Clark, 1994 International Society of Arboriculture

Pruning Mature Trees for Risk Reduction

There are few good reasons to prune mature trees. Removal of deadwood, directional pruning, removal of decayed or damaged wood, and end-weight reduction as a method of mitigation for structural faults are the only reasons a mature tree should be pruned. Live wood over 3" should not be pruned unless absolutely necessary. Pruning cuts should be clean and correctly placed. Pruning should be done in accordance with the American National Standards Institute (ANSI) A300 standards. It is far better to use more small cuts than a few large cuts as small pruning wounds reduce risk while large wounds increase risk.

Pruning causes an open wound in the tree. Trees do not "heal" they compartmentalize. Any wound made today will always remain, but a healthy tree, in the absence of decay in the wound, will 'cover it' with callus tissue. Large, old pruning wounds with advanced decay are a likely failure point. Mature trees with large wounds are a high failure risk.

Overweight limbs are a common structural fault in suppressed trees. There are two remedial actions for overweight limbs (1) prune the limb to reduce the extension of the canopy, or (2) cable the limb to reduce movement. Cables do not hold weight they only stabilize the limb and require annual inspection.

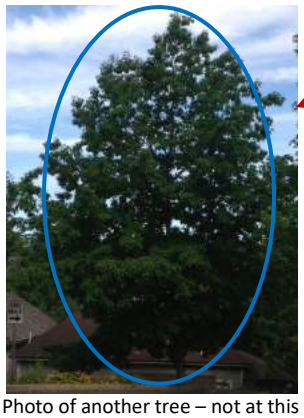


Photo of another tree – not at this site.

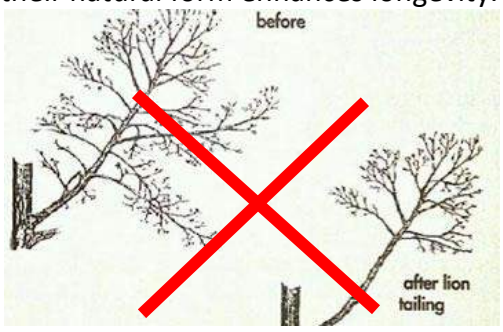
Normal limb structure

Over weight, reaching limb with main stem diameter small compared with amount of foliage present

Photo of another tree – not at this site

Lion's – Tailing is the pruning practice of removal of "an excessive number of inner and/or lower lateral branches from parent branches. Lion's tailing is not an acceptable pruning practice" ANSI A300 (part 1) 4.23. It increases the risk of failure.

Pruning – Cutting back trees changes their natural structure, while leaving trees in their natural form enhances longevity.



Pruning specifications for clearance of branches for placement of the Portable Unit
There are some branches that are growing in the area where the Portable will be placed. These branches should be pruned by a qualified tree care company to the following specifications:
Subject trees: Trees adjacent to the proposed Portable location
Objective: Prune the branches for building clearance while retaining as large a crown as possible.
System: A natural system shall be used

Location of Pruning: The pruning shall be performed in the area of the crown where branches conflict with the proposed placement of the Portable building. All live foliage in the interior of the crown not in conflict shall be retained. Dead branches can be removed anywhere in the crown.
Types of cuts: Branch removal cuts and reduction cuts;
Size of cuts: The smallest cuts possible to remove branches should be used. The largest diameter final cut should be the removal of a low branch on Tree 20, approximately 5 inches diameter.

Arborist Classifications

There are different types of Arborists:

Tree Removal and/or Pruning Companies. These companies may be licensed by the State of California to do business, but they do not necessarily have extensive knowledge about tree biology and proper care;

Arborists. Arborist is a broad term. It is intended to mean someone with specialized knowledge of trees but is often used to imply knowledge that is not there.

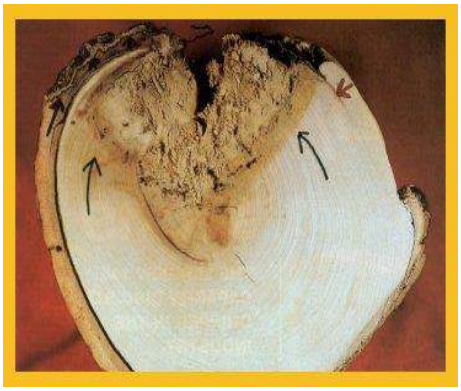
ISA Certified Arborist: An International Society of Arboriculture Certified Arborist is someone who has been trained and tested to have specialized knowledge of trees. You can look up certified arborists at the International Society of Arboriculture website: isa-arbor.org.

Consulting Arborist: An American Society of Consulting Arborists Registered Consulting Arborist is someone who has been trained and tested to have specialized knowledge of trees and trained and tested to provide high quality reports and documentation. You can look up registered consulting arborists at the American Society of Consulting Arborists website: https://www.asca-consultants.org/

Decay in Trees

Decay (in General): Fungi cause all decay of living trees. Decay is considered a disease because cell walls are altered, wood strength is affected, and living sapwood cells may be killed. Fungi decay wood by secreting enzymes. Different types of fungi cause different types of decay through the secretion of different chemical enzymes. Some decays, such as white rot, cause less wood strength loss than others because they first attack the lignin (causes cell walls to thicken and reduces susceptibility to decay and pest damage) secondarily the cellulose (another structural component in a cell walls). Others, such as soft rot, attack the cellulose chain and cause substantial losses in wood strength even in the initial stages of decay. Brown rot causes wood to become brittle and fractures easily with tension. Identification of internal decay in a tree is difficult because visible evidence may not be present.

According to Evaluation of Hazard Trees in Urban Areas (Matheny, 1994) decay is a critical factor in the stability of the tree. As decay progresses in the trunk, the stem becomes a hollow tube or cylinder rather than a solid rod. This change is not readily apparent to the casual observer. Trees require only a small amount of bark and wood to transport water, minerals and sugars. Interior heartwood can be eliminated (or degraded) to a great degree without compromising the transport process. Therefore, trees can contain significant amounts of decay without showing decline symptoms in the crown.

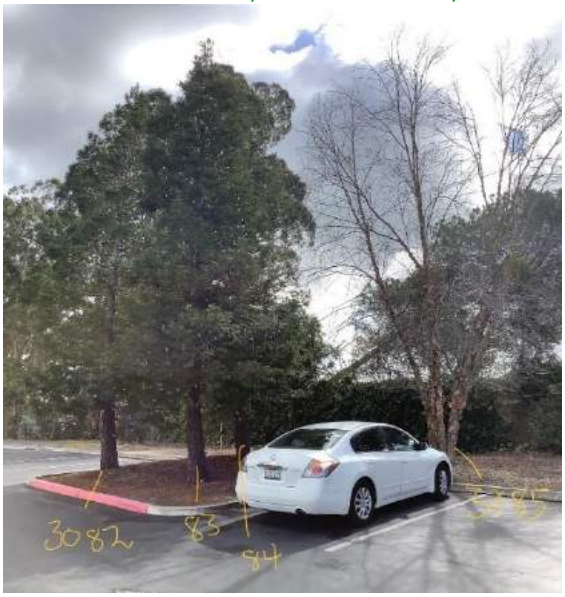


Compartmentalization of decay in trees is a biological process in which the cellular tissue around wounds is changed to inhibit fungal growth and provide a barrier against the spread of decay agents into the barrier zones is the formation of while a tree may be able to limit pruning cuts, in the event that there located vertically along the main additional cells. The weakest of the vertical wall. Accordingly, decay progression inward at large are more than one pruning cut trunk of the tree, the likelihood of decay progression and the associated structural loss of integrity of the internal wood is high.

Oak Tree Impacts

Our native oak trees are easily damaged or killed by having the soil within the Critical Root Zone (CRZ) disturbed or compacted. All of the work initially performed around protected trees that will be saved should be done by people rather than by wheeled or track type tractors. Oaks are fragile giants that can take little change in soil grade, compaction, or warm season watering. Don't be fooled into believing that warm season watering has no adverse effects on native oaks. Decline and eventual death can take as long as 5-20 years with poor care and inappropriate watering. Oaks can live hundreds of years if treated properly during construction, as well as later with proper pruning, and the appropriate landscape/irrigation design.

Appendix 5 – Images of Trees and Site


3082
83
84


3077
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3067

APPENDIX 6 – TREE PROTECTION SPECIFICATIONS

The trees proposed to be retained are smaller unprotected trees growing in site planters surrounded by pavement. The trees are under protected size and can be protected with fencing at the edge of the planter areas. While normally chain-link fence is required by the City, the golf course has a history of working around their trees. The course is requesting an exception to the chain link material and proposing to use the same materials they have proposed to use on the golf course renovation, orange plastic fence.

The reason for this request is the unprotected trees and the difficulty of placing chain link fence around small and different size islands without impacting traffic and parking.

During excavation, as the excavation approaches the tree driplines and protected areas, the roots 2” diameter and greater at the outside edge of the excavation closest to the trees that are proposed for retention shall be pruned prior to excavating the roots from the soil to avoid tearing the roots farther back towards the trees. This practice limits the impact to the trees to the point where the roots are pruned.

Pruning shall be performed with a sharp tool appropriate for the diameter of the root being severed, and clean cuts being made. If the root-cut site is open for more than 24 hours, a moist cover shall be put over exposed roots. The moist cover can be wet burlap, covered with a tarp to slow the evaporation from the burlap, or a comparable moisture protection. The moisture protection shall be in place until the roots are buried with soil.

COMMUNITY DEVELOPMENT DEPT.
701 Laurel Street
Menlo Park, CA 94025
650.330.6704
2/28/2011

TREE PROTECTION SPECIFICATIONS

1. A 6" layer of coarse mulch or woodchips is to be placed beneath the dripline of the protected trees. Mulch is to be kept 12" from the trunk.

2. A protective barrier of 6' chain link fencing shall be installed around the dripline of protected tree(s). The fencing can be moved within the dripline if authorized by the Project Arborist or City Arborist but not closer than 2' from the trunk of any tree. Fence posts shall be 1.5" in diameter and are to be driven 2' into the ground. The distance between posts shall not be more than 10'. This enclosed area is the Tree Protection Zone (TPZ).

3. Movable barriers of chain link fencing secured to cement blocks can be substituted for "fixed" fencing if the Project Arborist and City Arborist agree that the fencing will have to be moved to accommodate certain phases of construction. The builder may not move the fence without authorization form the Project Arborist or City Arborist.

4. Where the City Arborist or Project Arborist has determined that tree protection fencing will interfere with the safety of work crews, Tree Wrap may be used as an alternative form of tree protection. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City Arborist or Project Arborist. Straw waddle may also be used as a trunk wrap by coiling the waddle around the trunk up to a minimum height of six feet from grade. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the straw waddle.

5. **Avoid the following conditions.**
   DO NOT:
   a. Allow run off of spillage of damaging materials into the area below any tree canopy.
   b. Store materials, stockpile soil, or park or drive vehicles within the TPZ.
   c. Cut, break, skin, or bruise roots, branches, or trunks without first obtaining authorization from the City Arborist.
   d. Allow fires under and adjacent to trees.
   e. Discharge exhaust into foliage.
   f. Secure cable, chain, or rope to trees or shrubs.
   g. Trench, dig, or otherwise excavate within the dripline or TPZ of the tree(s) without first obtaining authorization from the City Arborist.
   h. Apply soil sterilants under pavement near existing trees.

6. Only excavation by hand or compressed air shall be allowed within the dripline of trees. Machine trenching shall not be allowed.

7. Avoid injury to tree roots. When a ditching machine, which is being used outside of the dripline of trees, encounters roots smaller than 2", the wall of the trench adjacent to the trees shall be hand trimmed, making clear, clean cuts through the roots. All damaged, torn and cut roots shall be given a clean cut to remove ragged edges, which promote decay. Trenches shall be filled within 24 hours, but where this is not possible, the side of the trench adjacent to the trees shall be kept shaded with four layers of dampened, untreated burlap, wetted as frequently as necessary to keep the burlap wet. Roots 2" or larger, when encountered, shall be reported immediately to the Project Arborist, who will decide whether the Contractor may cut the root as mentioned above or shall excavate by hand or with compressed air under the root. Root is to be protected with dampened burlap.

8. Route pipes outside of the area that is 10 times the diameter of a protected tree to avoid conflict with roots.

9. Where it is not possible to reroute pipes or trenches, the contractor shall bore beneath the dripline of the tree. The boring shall take place not less than 3' below the surface of the soil in order to avoid encountering "feeder" roots.

10. Trees that have been identified in the arborist's report as being in poor health and/or posing a health or safety risk, may be removed or pruned by more than one-third, subject to approval of the required permit by the Planning Division. Pruning of existing limbs and roots shall only occur under the direction of a Certified Arborist.

11. Any damage due to construction activities shall be reported to the Project Arborist or City Arborist within six hours so that remedial action can be taken.

12. An ISA Certified Arborist or ASCA Registered Consulting Arborist shall be retained as the Project Arborist to monitor the tree protection specifications. The Project Arborist shall be responsible for the preservation of the designated trees. Should the builder fail to follow the tree protection specifications, it shall be the responsibility of the Project Arborist to report the matter to the City Arborist as an issue of non-compliance.

13. Violation of any of the above provisions may result in sanctions or other disciplinary action.

MONTHLY INSPECTIONS

It is required that the site arborist provide periodic inspections during construction.
Four-week intervals would be sufficient to access and monitor the effectiveness of the Tree Protection Plan and to provide recommendations for any additional care or treatment.

W:\HANDOUTS\Approved Tree Protection Specifications 2009.doc

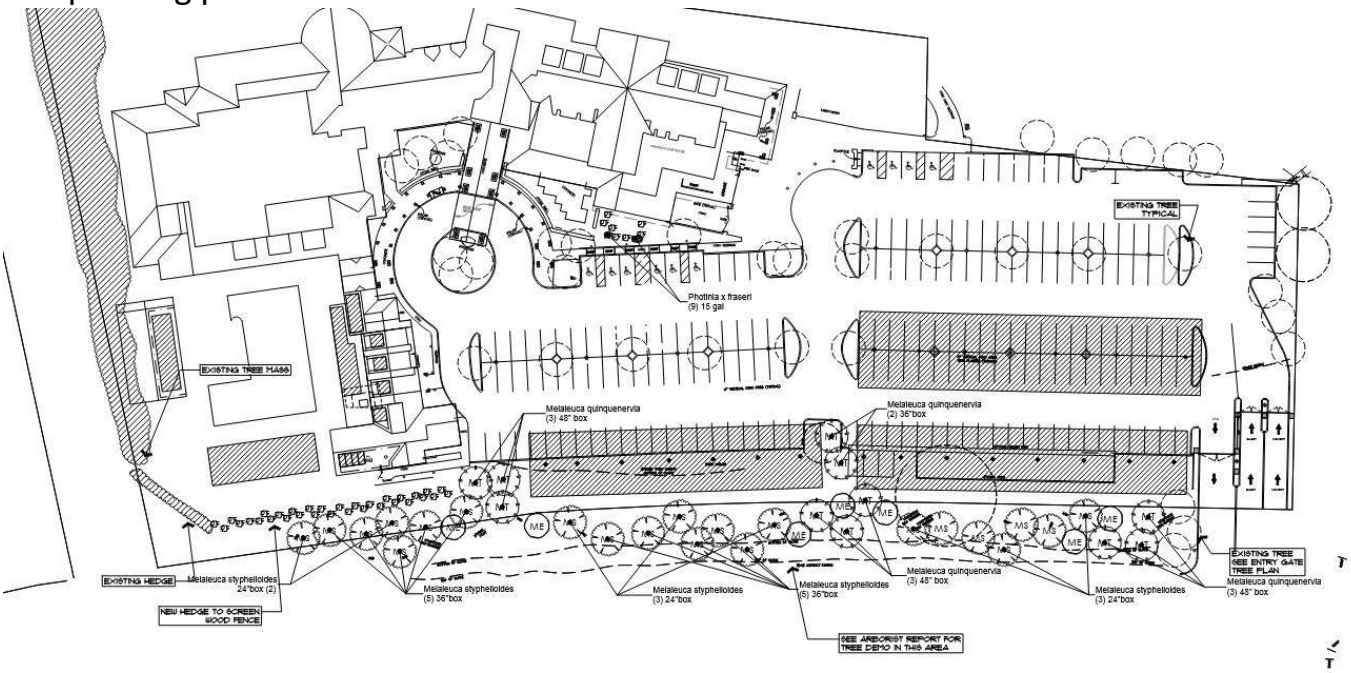
Appendix 7 Tree Replacement Plan

The tree replacement plan has been provided by the designer. The plans are shown below with a summary sheet. Th planting plan may be adjusted and will meet or exceed the required mitigation to be approved by the City of Menlo Park.

TREE SCHEDULE - REPLACEMENT VALUES ESTIMATED BY ARBORIST BASED ON CONTAINER SIZE

PLANT SCHEDULE RE						
TREES	CODE	BOTANICAL / COMMON NAME	CONT	QTY	UNIT COST	TOTAL
MT	MT	Melaleuca quinquenervia / Cajeput Tree Multi-Trunk	36"box	2	$200	$400
MT		Melaleuca quinquenervia / Cajeput Tree Multi-Trunk	48" box	9	$5,000	$45,000
MS	MS	Melaleuca styphelioides / Prickly Leaved Paperback	24"box	8	$400	$3,200
MS		Melaleuca styphelioides / Prickly Leaved Paperback	36"box	14	$1,200	$16,800
ME	ME	Metrosideros excelsa / New Zealand Christmas Tree	24"box	7	$400	$2,800
					TOTAL:	$68,200

The planting plan is shown below:



APPENDIX 8 TERMS

Species of trees is listed by our local common name and botanical name by genus and species.

DBH (diameter breast high) is normally measured at 4'6" (54" above the average ground, height but if that varies then the location where it is measured is noted here. A steel diameter tape was used to measure the trees.

Canopy radius is measured in feet. It is the farthest extent of the crown composed of leaves and small twigs measured by a steel tape. This measurement often defines the Critical Root Zone (CRZ) or Protection Zone (PZ), which is a circular area around a tree with a radius equal to this measurement.

Actions listed are recommendations to improve health or structure of the tree. Trees in public spaces require maintenance. If a tree is to remain and be preserved, then the tree may need some form of work to reduce the likelihood of failure and increase the longevity of the tree. Preservation requirements and actions based on a proposed development plan are not included here.

Arborist Rating is subjective to condition and is based on both the health and structure of the tree. All of the trees were rated for condition, per the recognized national standard as set up by the Council of Tree and Landscape Appraisers and the International Society of Arboriculture (ISA) on a numeric scale of 5 (being the highest) to 0 (the worst condition, dead). The rating was done in the field at the time of the measuring and inspection.

Table A – Ratings Descriptions

No problem(s)	5	excellent
No apparent problem(s)	4	good
Minor problem(s)	3	fair
Major problem(s)	2	poor
Extreme problem(s)	1	hazardous, non-correctable
Dead	0	dead

Rating #0: This indicates a tree that has no significant sign of life.

Rating #1: The problems are extreme. This rating is assigned to a tree that has structural and/or health problems that no amount of work or effort can change. The issues may or may not be considered a dangerous situation.

Rating #2: The tree has major problems. If the option is taken to preserve the tree, its condition could be improved with correct arboricultural work including, but not limited to: pruning, cabling, bracing, bolting, guying, spraying, mistletoe removal, vertical mulching, fertilization, etc. If the recommended actions are completed correctly, hazard can be reduced and the rating can be elevated to a 3. If no action is taken the tree is considered a liability and should be removed.

Rating #3: The tree is in fair condition. There are some minor structural or health problems that pose no immediate danger. When the recommended actions in an arborist report are completed correctly the defect(s) can be minimized or eliminated.

Rating #4: The tree is in good condition and there are no apparent problems that a Certified Arborist can see from a visual ground inspection. If potential structural or health problems are tended to at this stage future hazard can be reduced and more serious health problems can be averted.

Rating #5: No problems found from a visual ground inspection. Structurally, these trees have properly spaced branches and near perfect characteristics for the species. Highly rated trees are not common in natural or developed landscapes. No tree is ever perfect especially with the unpredictability of nature, but with this highest rating, the condition should be considered excellent.

Notes indicate the health, structure and environment of the tree and explain why the tree should be removed or preserved. Additional notes may indicate if problems are minor, extreme or correctible.

Remove is the recommendation that the tree be removed. The recommendation will normally be based either on poor structure or poor health and is indicated as follows:

Yes H – Tree is unhealthy
Yes S – Tree is structurally unsound

Assignment Assumptions and Limiting Conditions

1. Consultant assumes that any legal description provided to Consultant is correct and that title to property is good and marketable. Consultant assumes no responsibility for legal matters. Consultant assumes all property appraised or evaluated is free and clear, and is under responsible ownership and competent management.
2. Consultant assumes that the property and its use do not violate applicable codes, ordinances, statutes or regulations.
3. Although Consultant has taken care to obtain all information from reliable sources and to verify the data insofar as possible, Consultant does not guarantee and is not responsible for the accuracy of information provided by others.
4. Client may not require Consultant to testify or attend court by reason of any report unless mutually satisfactory contractual arrangements are made, including payment of an additional fee for such Services as described in the Consulting Arborist Agreement.
5. Unless otherwise required by law, possession of this report does not imply right of publication or use for any purpose by any person other than the person to whom it is addressed, without the prior express written consent of the Consultant.
6. Unless otherwise required by law, no part of this report shall be conveyed by any person, including the Client, the public through advertising, public relations, news, sales or other media without the Consultant‘s prior express written consent.
7. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant’s fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event or upon any finding to be reported.
8. Sketches, drawings and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by Consultant as to the sufficiency or accuracy of the information.
9. Unless otherwise agreed, (1) information contained in this report covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing or coring. Consultant makes no warranty or guarantee, express or implied that the problems or deficiencies of the plans or property in question may not arise in the future.
10. Loss or alteration of any part of this Agreement invalidates the entire report.

Report Assumptions and Limitations:

This report provides information about the subject trees at the times of the inspection. Trees and conditions may change over time. This report is only valid for the trees with the conditions present at the times of the inspections. All observations were made while standing on the ground. The inspection consisted of visual observations, using a probe to gain additional information about decay and hollow portions of the tree, and if needed, light excavation was performed to observe shallow depth areas below grade at the base of the trees. No further examinations were requested or performed.

Sincere attempts were made to accurately locate the trees and show the trees on the pan. All tree locations were attempted to be shown as observed in the field.

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 seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that can 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.

Treatments, 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, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the recommended treatment or remedial measures.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks is to eliminate all trees. Our company goal is to help clients enjoy life with trees, and grow better trees.

Certificate of Performance

I, Gordon Mann, certify that:

Certified Arborists Tom Stein, WE-12854A and Gordon Mann, WE-0151AM, have personally inspected the trees and site referred to in this report, and I have reviewed all the data and stated my findings accurately. The extent of the inspection is stated in the attached report under Assignment;

I have no current or prospective interest in the vegetation, or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;

The analysis, opinions and conclusions stated herein are my own and are based on current scientific procedures and facts;

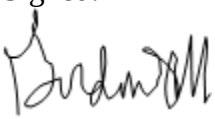
My analysis, opinions, and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices;

No one provided significant professional assistance to me, except as indicated within the report;

My compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client, or any other party, nor upon the results of the assignment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member in good standing of the International Society of Arboriculture (ISA) and an ISA Certified Arborist and Municipal Specialist. I am also a Registered Consulting Arborist member in good standing of the American Society of Consulting Arborists. I have been involved in the practice of arboriculture and the care and study of trees for over 43 years.

Signed:



Gordon Mann
Date: January 31, 2023