EXHIBITS A

ARBORIST REPORT-

Tree Inventory & Preliminary Construction Impacts for:

Ocean Place – Ocean/Hubbard Streets & May Avenue

APN Numbers: 008-331-03 & 04,05,06,07,08,12,13,14,15,25,26,27,28,29,30,31,32,35,41

Santa Cruz, CA 95060

May 15,2020

Prepared for:

SE-Santa Cruz LLC
Mr. Matt Sridar/ Sridar Equities
177Saratoga Ave., Suite 210
San Jose, CA 95129

Prepared by:

Kurt Fouts
Arborist Consultant
826 Monterey Avenue
Capitola, CA 95010
831-359-3607
kurtfouts1@outlook.com

ISA Certified Arborist WE0681A

Table of Contents

Attachments: Appendix A - H

Appendix A – Tree Assessment Chart

Appendix B – Criteria for Tree Assessment Chart

Appendix C –Tree Location Map

Appendix D – Proposed Site Plan

Appendix E – Bibliography

Appendix F - Glossary

Appendix G - Tree Protection Guidelines & Restrictions

- Protecting Trees During Construction
- Project Arborist Duties & Inspection Schedule
- Tree Protection Fencing
- Tree Protection Signs
- Monitoring
- Root Pruning
- Tree Work Standards & Qualifications
- City of Santa Cruz Regulated Tree Definition

Appendix H - Assumptions & Limiting Conditions

SUMMARY

This report provides the following information:

1. A summary of the health and structural condition of 22 trees.
2. A preliminary evaluation of anticipated construction impacts to the trees.
3. Recommendations for retention or removal of assessed trees based on their condition and anticipated construction impacts.

- The *Tree Assessment Chart*, Appendix A is the condensed reference guide to inform all tree management decisions for the trees evaluated.
- A multi-story mixed-use building is proposed for multiple parcels at Ocean Street, Hubbard Street and May Avenue.
- The existing residential homes and commercial buildings will be demolished and replaced with the new building.
- Twenty-two trees, twelve “protected” and ten “not protected” within or near the project limits were inventoried.
- Nine “protected” trees inventoried were in good or fair condition, and three were in poor condition.
- Seven “protected” trees are located within the grading limits will suffer high construction impacts and are recommended for removal.
- One “protected” street tree is within the footprint of the ramp down for basement garage and is recommended for removal.
- Four “protected” street trees will receive moderate construction impacts and can be retained.
- The retained street trees will require mitigation methods to reduce construction impacts including tree protection fencing, and additional protection specifications to be included with the final civil and architectural plan sets.
- The eight “protected” trees recommended for removal will require mitigation in the form of tree replacement plantings.
- A Tree Protection Plan sheet (s), containing tree protection specifications will be included with the final plan submittal.

Background

Plans will be submitted to the City of Santa Cruz Planning Department, for demolition of several existing homes and businesses and construction of a new multi-unit residential and commercial project at Ocean Street, Hubbard Street and May Avenue, Santa Cruz. SE-Santa Cruz LLC requested my services, to assess the condition of twenty-two trees within the project limits, and the construction impacts that may affect them. Further, to provide a report with my findings and recommendations to meet City of Santa Cruz planning requirements.

Assignment

Provide an arborist report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter, height and canopy diameter spread), condition (health and structure), and suitability for preservation ratings. Further, to review the preliminary development plans and assess the potential construction impacts.

To complete this assignment, the following services were performed:

- **Tree Resource Evaluation:** Inventory, evaluate and assign suitability for preservation ratings for subject trees. *Note: access to some trees was restricted and these trees could not be tagged. They are noted in the Tree Assessment Chart.*
- **Plan Review: Reviewed provided plans including**: Preliminary Site Plan, by SCDC Architecture, dated 11/8/19 & Preliminary Grading & Utility Plan by BkF Engineers, dated 11/8/2019.
- **Preliminary Construction Impact Assessment:** Combine tree resource data with anticipated construction impacts, to provide recommendations for removal or retention of trees.
- **Mapping:** Tree canopies were plotted onto: Topographic Survey, Hubbard & Ocean Mixed Use Development, Santa Cruz, by BkF Engineers dated 8/29/2018, and a Tree Location Plan sheet (Sheet LM), was created.

Limits of the Assignment

The information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection on4/27/2020 and 4/12/2020.
The inspection is limited to visual examination of accessible items without climbing, dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the developer, their agents, and the City of Santa Cruz as a reference for existing tree conditions and to help satisfy the City of Santa Cruz planning requirements.

Resources

All information within this report is based on site plans as of the date of this report.
Resources are as follows:

- First Floor Plan & Site Plan, sheet no. A2.1, by SCDC Architecture, Santa Clara, dated 11/8/2020.
- Preliminary Grading & Utility Plan by BkF Engineers, dated11/8/2019.
- Site Visit, Tree Inventory & Condition Evaluation at, Ocean/Hubbard Streets and May Avenue, on 4/27/2020 and 5/12/2020.
- City of Santa Cruz Municipal Code – Chapter 9.56 *Preservation of Heritage Trees* (applicable sections).

OBSERVATIONS

Several residential and commercial properties comprise the proposed project site, fronting the streets of Ocean, May and Hubbard (Image #1).

Image #1 – Project site.

I inventoried 22 trees. Of the 22 trees, twelve are classified as “heritage” trees based on City of Santa Cruz tree ordinance criteria. Five of the protected trees are street trees, located in sidewalk cutouts along Ocean Street. The street tree species include three London plane trees (*Platanus X hispanica*), one red oak (*Quercus rubra*) and one Himalayan birch (*Betula utilis var. jaquemontii*).

All the London planes are mature trees in good condition (Images #1 & 2).

Image #1 – Tree T2, London plane. In sidewalk cutout along Ocean Street. The tree has good structure and is in good condition.

Image #2 - Trees T3 & T4, mature London plane trees, in sidewalk cutouts along Ocean Street. The two trees are in good condition.

Most of the street trees show evidence of sidewalk repair in the recent past as evidenced by newer concrete sections. Some evidence of shallow surface roots and root diameter expansion causing sidewalk and curb lifting and cracking at some trees is noted (Image #3).

Image #3 - Tree T3, London plane. Note lighter colored concrete is more recent. Also lifting of sidewalk and curb cracking (arrows).

Tree T1, a younger red oak is in fair condition (Image #4).

Image #4 – Tree T1, red oak street tree, in sidewalk cutout along Ocean Street,

Tree T5 is a young Himilayan birch in good condition (Image #5).

Image #5 –Tree T5, Himalayan birch street tree, in sidewalk cutout along Ocean Street.

Other “heritage” trees assessed include an Italian stone pine (*Pinus pinea*), Image #6, a walnut (*Julgans spp*.), Image #7, a mature blackwood acacia (*Acacia melanoxylon*), Image #8, a fan palm (*Washingtonia spp.*), Image #9, a coast redwood (*Sequoia sempervirens*) Image #10 and two willow (*Salix spp*.), no image.

Image #6 – Tree T8, Italian stone pine. Note horizontal trunk along ground. Despite its poor trunk growth habit, the structure is stable and does not present any risk. The canopy appears vigorous and the tree is in good health.

Tree T11, a mature walnut has two trunks (18” & 14”) and is in fair condition (Image #7).

Image #7 – Tree T11, walnut. A 4”X4” cavity is visible at 4’ above grade. Decay from the cavity is not extensive and the tree is in fair condition.

Tree T16, blackwood acacia is in fair condition, (Image #8).

Image #8 – Tree T16, Blackwood acacia. The tree has three co-dominant trunks and grows very close to existing building.

Tree T17 is a fan palm located in the back yard a residential property, adjacent to May Avenue. (Image #9).

Image #9 – Tree T17, fan palm. Tree is in good condition. The trunk is growing against the adjacent unit and needs pruning of dead fronds.

Tree T23 a coastal redwood, is in a commercial lot adjacent to May Avenue (Image #10). The tree is in good condition.

Image #10 – Tree T23, coast redwood (circled).

DISCUSSION

Species List

TOTAL SUBJECT TREES: 22 Trees

Protected:12

3	London Plane	(*Platanus X hispanica*)
1	Red Oak	(*Quercus rubra)*
1	Himalayan Birch	(*Betula utilis var. jaquemontii*)
2	Willow	(*Salix spp*.)
1	Walnut	(*Julgans spp*.)
1	Coast Redwood	(*Sequoia sempervirens*)
1	Blackwood Acacia	(*Acacia melanoxylon*)
1	Italian Stone Pine	(*Pinus pinea*)
1	Fan Palm	(*Washingtonia spp.*)

Not Protected: 10

7 different species. See Tree Assessment Chart, Appendix A for complete list.

Tree Evaluation and Recording Methods

Site evaluations were made on 4/27/2020 & /5/12/2020 *The inventory included all trees within the project limits.* The health and structural **condition** of each tree was assessed and recorded. Based on the trees health and structural condition, each trees **suitability for preservation** was rated and recorded. The recorded data is included in the *Tree Assessment Chart, Appendix A,* of this report. Detailed criteria for each assessment rating category are included in Appendix B – *Criteria for Tree Assessment Chart.*

Numbered trees on the *Tree Assessment Chart*, Appendix A., correlate with the plotted trees on the attached *Tree Location Map*, Appendix C.

Condition Rating – Protected Trees

A trees condition is determined by an assessing both the **health** and **structure**, then combining the two factors to reach a *condition rating*. Tree condition is rated as poor, fair or good. The quantity of trees assigned for each category (good, fair or poor), is indicated below:

Tree Condition Rating

- Good - 2
- Fair - 16
- Poor - 4

Suitability for Preservation- Protected Trees

A trees suitability for preservation is determined based on its health, structure, age, species characteristics and longevity using a scale of good, fair or poor. The quantity of trees assigned to each category (good, fair or poor), is listed below.

Suitability Rating

- Good - 6
- Fair – 9
- Poor - 7

Tree Protection Zone

The tree protection zone (TPZ), is a defined area (radius from trunk), within which certain activities are prohibited or restricted to minimize potential injury to designated trees during construction.

The size of the optimal TPZ can be determined by a formula based on 1) trunk diameter 2) species tolerance to construction impacts, and 3) tree age (Matheny, N. and Clark, J 1998). In some instances, tree drip line is used as the TPZ. Development constraints can also influence the final size of the tree protection zone.

Fencing is installed to delineate the (TPZ), and to protect tree roots, trunk, and scaffold branches from construction equipment. *The fenced protection area may be smaller than the optimal or designated TPZ area in some circumstances.* Tree protection may also involve the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage from construction equipment. *See Tree Protection Guidelines & Restrictions* – Appendix E.

Once the TPZ is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPZ if allowed for and specified by the project arborist.

Where tree protection fencing cannot be used, or as an additional protection from heavy equipment, tree wrap may be used. 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 wattle may also be used as a trunk wrap and secured with orange plastic fencing.

Data has been entered in the *Tree Assessment Chart – Appendix A,* which indicates the optimal Tree Protection Zone for each tree.

Additional general tree protection guidelines are included in *Tree Protection Guidelines & Restrictions* – Appendix G.

Critical Root Zone

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter than the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 1ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

Root Disturbance Distance

No one can estimate and predict with absolute certainty what distance from a tree, a soil disturbance such as excavation for construction should be, to ensure it will not significantly affect tree stability or health. Or to what degree, (low, moderate or high), a tree might be impacted. There are simply too many variables involved that we cannot see or anticipate. However, three times the D.B.H. (diameter at breast height), is a widely accepted minimum used in the industry for root disturbance, *on one side of the trunk*, and is supported by several research studies including (Smiley, Fraedich & Hendrickson 2002, Bartlett Tree Research Laboratories). This distance is often used during the design and planning phases of a project in order to estimate root loss due to construction activities. This distance is a guideline only and should be increased for trees with significant leans, decay or other structural problems.

The ISA, International Society of Arboriculture- Root Management (2017) publication recommends, “cutting roots at a distance greater than six times the trunk diameter (DBH) minimizes the likelihood of affecting both health and stability. This recommendation is given further direction by the companion publication, A.N.S.I. (*American National Standard*) A300 (Part 8)- 2013 Root Management, when roots are cut in a *non-selective* manner, i.e. in a straight line on one side of a tree. It says, if the cutting is “within six times the trunk diameter (DBH), mitigation shall be recommended”. Further, A.N.S.I. recommends the “minimum distance from the trunk for root cutting should be adjusted according to trunk diameter, species tolerance to root loss, tree age, health and site condition”.

In general, root cutting that occurs at a distance less than six times the diameter of a tree should be undertaken by hand digging and hand (or Sawzall), root pruning. These methods help mitigate root loss impacts.

Construction Impacts to Subject Trees

Based on the preliminary site plan, impacts to most of the trees, protected and not protected, will be high. All the trees evaluated except for the five street trees on Ocean Street will be within the grading limits. Grading for this large-scale multi-parcel mixed-use project will occur to the property lines of each parcel. Further, excavation for the basement will occur within 5 – 20 feet of the property lines. Therefore, impacts will be high to the seventeen trees within the grading limits and it will not be feasible to retain any of the trees.

The impacts to three street trees, which are outside the grading limits, T2 and T4 London plane, and T5, Himalayan birch, cannot be fully assessed based on the preliminary site plan. The design and construction materials used for the sidewalk design and other site amenities need to be determined before the impacts can be defined, and impacts could range from moderate to high. If impacts can remain moderate, the trees can be retained.

Impacts to street tree T3, London plane will be moderate to high. The design and construction materials used for the sidewalk design and other site amenities need to be determined before the impacts can be defined, and impacts could range from moderate to high.

Construction Impacts to Subject Trees, Continued:

Further, the new 4” diameter fire water service lateral and the new 6” sanitary service lateral will each be within ten feet or less (one line on either side), from tree T3. Trenching to install the laterals will require some root loss and the trees ability to absorb water will be reduced. However, with tree protection measures, impacts from this work can be reduced from high to moderate and tree retention is possible.

Tree T3, London plane is in 3-foot by 5-foot sidewalk cutout, and T4, London plane and T5 Himalayan birch are in 2-foot by 2-foot sidewalk cutouts. Their location is shown below in the proposed grading and utility plan (Image #11).

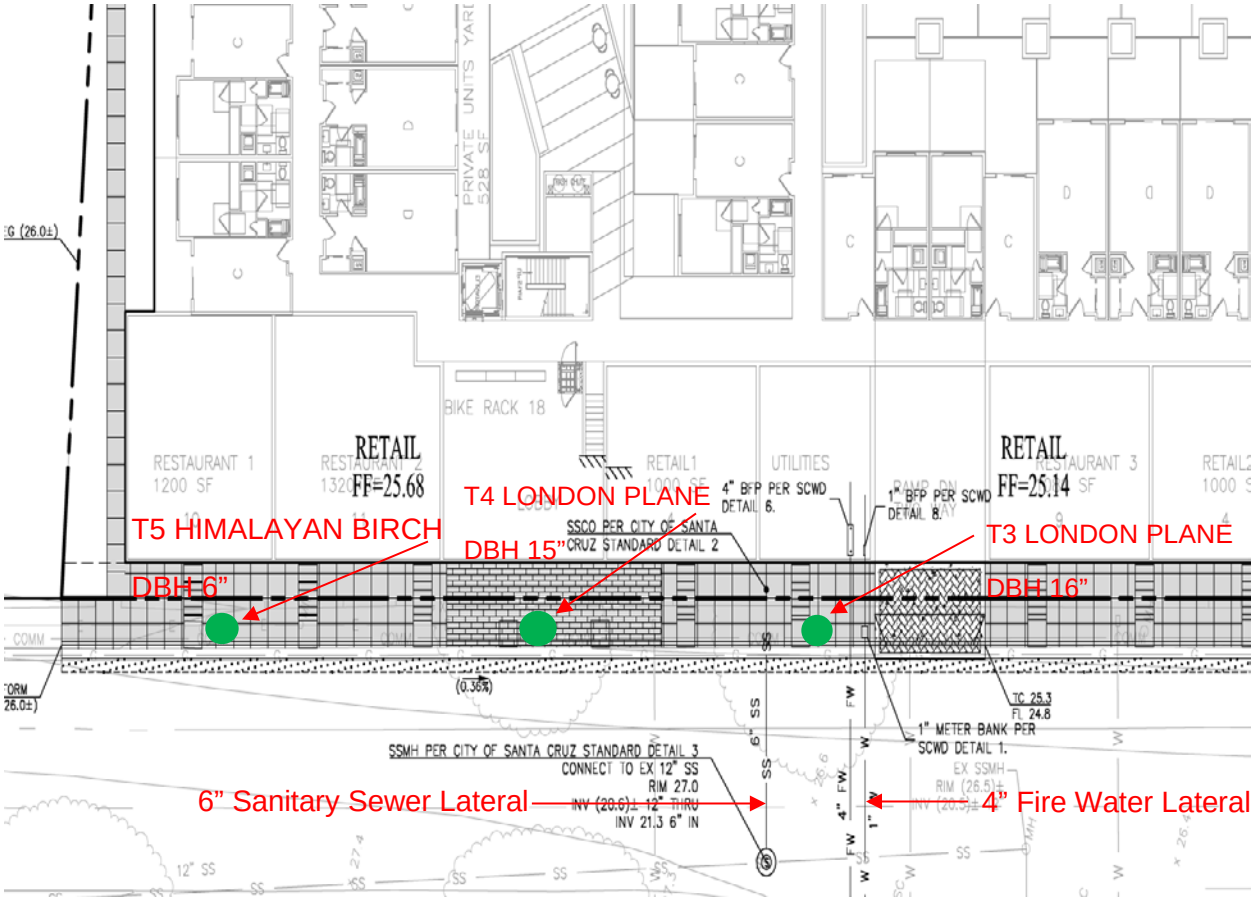


Image #11 – Trees T3 & T4, London plane and T5, Himalayan birch. Note location of utility laterals adjacent to tree T3 London plane.

Construction Impacts to Subject Trees, Continued:

Since it is assumed many new street trees will be installed to replace removed trees, the London plane and birch species may not fit the new landscape theme and this factor should be given consideration when assessing to remove or retain them.

The impacts to one street tree T1, red oak will be high. The tree is in the footprint of the down ramp for the basement garage and its removal is required.

One 24” diameter coast redwood, tree T23, is in good condition. See page 13, image #10. The 60-foot-tall tree has an average canopy diameter of 15 feet and could be boxed, stored on-site, and transplanted during the landscaping phase. Access to the tree is good. The redwood would require a minimum box size of 8X8 feet, and if used would need watering during storage, and a scheduled post planting monitoring program, to ensure irrigation amounts are appropriate until reestablished. If a location can be found on site that works with the landscape scheme, it could be an asset to the project.

Tree protection specifications will be determined once the final plan sets are completed and will be included in the tree protection plan. A tree protection plan sheet (s) shall be included with the final plan set submittal.

Impact Level – Protected Trees

Impact level rates the degree a tree may be impacted by construction activity and is primarily determined by how close the construction procedures occur to the tree. Construction impacts are rated as low, moderate, high. The quantity of trees assigned for each category (low, moderate, high), is indicated below:

Impact Rating (Protected trees)

- Low - 0
- Moderate – 4
- High - 18

Mitigation Measures for Retained Trees

The trees retained on this project will require some or all the following methods to protect them from the impacts described above and to minimize root loss during the construction phases.

- Tree Protection Fencing (all trees).
- Hand trenching.
- Supervised root pruning.

Tree protection specifications will be included on a separate **Tree Protection Plan Sheet**, *Sheet T1* and other T sheets as necessary, once final plan sets are completed. **These plan sheets with tree protection specifications shall become an element of the final plan set.**

Trees Recommended for Removal Due to Impacts

` **“Protected” Trees**

1	Red Oak	(Quercus rubra)	
1	Coast Redwood	(*Sequoia sempervirens*)	
1	Blackwood Acacia	(*Acacia melanoxylon*)	**“Protected” Trees**
1	Italian Stone Pine	(*Pinus pinea*)	
1	Fan Palm	(*Washingtonia spp*.)	
2	Willow	(*Salix spp*.)	
1	Walnut	(*Julgans spp*.)	
8	**Total**		

“Not protected” trees

10 Total 7 different species.
(See Tree Assessment Chart, Appendix A for complete list of ”not protected” trees)

Replacement Trees

For each protected tree removed, one 15-gallon replacement tree is required. A total of eight replacement trees, including one street tree, will be required. Replacement trees should be planted away from structures and where they have enough room to develop. Do not install trees where overhead wire exist. The trees must receive supplemental irrigation equal to their establishment requirements for the first two years.

The preliminary plan set includes an Overall Conceptual Landscape Plan (Sheet L1.1) containing approximately 80 street trees (with tree grates), and approximately 90 trees distrusted throughout the new site. Container size for projects of this scale are typically 15 gallon, with some 24 inch and 36-inch box trees used.

Replacement Trees for City of Santa Cruz Street Trees:

- For each tree removed, one replacement tree is required. In some situations, the city will provide 15-gallon trees of an approved street tree species.
- If street trees are replaced, an approved cast iron grate must be installed (Neenah Foundry #8710) with each tree.
- Applicants may elect to pay an in-lieu fee to the tree trust fund of $150 for off- site mitigation. (Contribution to the Tree Trust Fund are used to purchase street trees, trees for projects, etc.)
- If the $250.00 refundable bond is placed and the tree(s) are replanted, permittee must contact the City Urban Forester, 831-420-5246 after 3 months of establishment to the $250.00 bond returned. Once the permit is issued there is a 10-day appeal period as required by ordinance before the permit becomes effective.
- If no appeal is filed, the permit is valid for 45 days. Aggrieved parties wishing to appeal approval of a tree permit may submit a tree appeal application and $100 fee to the Parks and Recreation Department.
- If you choose to make a monetary donation to the City’s Tree Trust Fund, your donation is used to purchase street trees to be planted in the City of Santa Cruz.

CONCLUSION

- The *Tree Assessment Chart*, Appendix A is the condensed reference guide to inform all tree management decisions for the trees evaluated.
- A multi-story mixed-use building is proposed for multiple parcels at Ocean Street, Hubbard Street and May Avenue.
- The existing residential homes and commercial buildings will be demolished and replaced with the new building.
- Twenty-two trees, twelve “protected” and ten “not protected” within or near the project limits were inventoried.
- Nine “protected” trees inventoried were in good or fair condition, and three were in poor condition.
- Seven “protected” trees are located within the grading limits will suffer high construction impacts and are recommended for removal, including trees T8, T11, T13, T14, T16, T17 & T21.
- One “protected” street tree, T1, is within the footprint of the ramp down for basement garage and is recommended for removal.
- Four“ protected” street trees will receive moderate construction impacts and can be retained including trees T2 – T5.
- The retained street trees will require mitigation methods to reduce construction impacts including tree protection fencing, and additional protection specifications to be included with the final civil and architectural plan sets.
- The eight “protected” trees recommended for removal will require mitigation in the form of tree replacement plantings. For each tree removed, one to three trees will be required.
- An overall conceptual landscape plan (Sheet L1.1), includes approximately 170 trees to be planted on site.
- One “protected” tree recommended for removal, coast redwood,T23, should be considered for boxing and reuse on site.
- A Tree Protection Plan sheet (s), containing tree protection specifications will be included with the final plan submittal.

RECOMMENDATIONS

1. Obtain all necessary permits prior to removing or significantly altering any trees on site.
2. Remove all trees significantly impacted by the project or as recommended in Tree Assessment Chart, Appendix A.
3. Consider transplanting and reusing, coast redwood T23, on site.
4. Applicant to adhere to all tree protection specifications included with final plan sets.

Respectfully submitted,

Kurt Fouts

Kurt Fouts ISA Certified Arborist WE0681A

Kurt Fouts
Arborist Consultant
826 Monterey Avenue
Capitola, CA 95010
831-359-3607
kurtfouts1@outlook.com

Ocean Place - Ocean Street, May Avenue & Hubbard Street, Santa Cruz, CA

Tree Assessment Chart - Appendix A

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Retention or Removal Code:

RT: Retain Tree
RI: Remove Due to Construction Impacts

I.M. Impacts Can Be Mitigated With Pre-Construction Treatments
R.C. Remove Due to Condition

Protected Tree City of Santa Cruz Any tree 14 inches or greater in diameter measured at 4.5 feet above grade. Street trees regardless of size.

Tree #	Species	Trunk Diameter @ 54 inches a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T1	red oak (*Quercus rubra*)	12"	Yes	25'X10'	Fair	Fair	Fair	9'	High (Within foot print of ramp down for basement)	R.I.	Street Tree in 3' diameter sidewalk cutout. Within footprint of ramp down for basement garage. Dieback of twigs up to 1/2" in diameter over 40% of canopy.
T2	London plane tree (Platanus x hispanica)	17"	Yes	50'X30'	Good	Good	Good	12'	Moderate to High - Depending on hardscape & other site ammmenities	R.T.	Street tree in 3'X5' sidewalk cutout. Within 12' of ramp down.
T3	London plane tree	16"	Yes	45'X30'	Fair	Good	Good	12'	Moderate to High - Root loss, excavation for utilities	R.T.	Street tree in 4.5'X3' sidewalk cutout. 10' or less from sanitary sewer & fire water service laterals. Curb is cracking and lifting from root diameter expansion. Minor fungal leaf disease present, anthracnose (Apiognomonia veneta), powdery mildew (Microsphaera sp.) , causing minor leaf and twig dieback throughtout canopy.
T4	London plane tree	15"	Yes	50'X25'	Fair	Good	Good	11'	Moderate to High - Depending on hardscape & other site ammmenities	R.T.	Street tree in 2'X2' sidewalk cutout. Minor fungal leaf disease present, anthracnose (Apiognomonia veneta), powdery mildew (Microsphaera sp.) , causing minor leaf and twig dieback throughtout canopy.

Kurt Fouts
Arborist Consultant
826 Monterey Avenue
Capitola, CA 95010
831-359-3607
kurtfouts1@outlook.com

5/15/2020

Ocean Place - Ocean Street, May Avenue & Hubbard Street, Santa Cruz, CA

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 54 inches a.g.	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T5	white barked Himalayan birch (*Betula utilis var. jacquemontii*)	6"	Yes	15'X10'	Good	Fair	Good	6'	Moderate to High - Depending on hardscape & other site ammmenities	R.T.	Street tree in 2'X2' sidewalk cutout.
T6	walnut (*Julgans spp* .)	7",7"	No	15'X15'	Good	Fair	Fair	10'	High -Within grading limits	R.I.	Co-dominant trunks at 1' above grade.
T7	plum (*Prunus spp.*)	Multiple trunks all <6"	No	15'X15'	Good	Fair	Fair	10'	High -Within grading limits	R.I.	
T8	Italian stone pine (*Pinus pinea*)	16"	Yes	15'X15'	Good	Poor	Poor	12'	High -Within grading limits	R.C., R.I.	First ten feet of trunk grows along ground, then trunk goes vertical.
T9 (No tag)	pittosporum (*Pittosporum spp* .)	Multiple trunks all <6"	No	10'X10' (ave.)	Poor	Poor	Poor	N/A	High -Within grading limits	R.C., R.I.	Three trees all overgrown with ivy.

Kurt Fouts
Arborist Consultant
826 Monterey Avenue
Capitola, CA 95010
831-359-3607
kurtfouts1@outlook.com

5/15/2020

Ocean Place - Ocean Street, May Avenue & Hubbard Street, Santa Cruz, CA

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T10 (No tag)	glossy privet (*Ligustrum lucidum*)	6",6" (2 trees)	No	30'X10' & 20'X10'	Fair	Fair	Fair	8'	High -Within grading limits	R.I.	
T11	walnut	18",14"	Yes	35'X20'	Fair	Fair	Fair	15'	High -Within grading limits	R.I.	4"X4" cavity with deadwood and decay in one trunk.
T12	plum	Multiple trunks all <6"	No	40'X10'	Poor	Poor	Poor	10'	High -Within grading limits	R.C.,R.I.	Canopy covered in ivy.
T13	willow (*Salix spp.*)	15"	Yes	15'X15'	Fair	Poor	Poor	12'	High -Within grading limits	R.C., R.I.	Horizontal trunk growth. Some deadwood and decay with wood decay pathogens present.
T14	willow	14"	Yes	15'X15'	Fair	Poor	Poor	11'	High -Within grading limits	R.C., R.I.	Tree leans 15 degrees and self corrects to vertical.
T15	No tree, #15										
T16	blackwood acacia (*Acaia melanoxylon*)	16",16", 16"	Yes	60'X35'	Fair	Fair	Fair	16'	High -Within grading limits	R.I.	Co-dominant trunks at 3' above grade.

Kurt Fouts
Arborist Consultant
826 Monterey Avenue
Capitola, CA 95010
831-359-3607
kurtfouts1@outlook.com

5/15/2020

Ocean Place - Ocean Street, May Avenue & Hubbard Street, Santa Cruz, CA

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T17	fan palm (*Washingtonia spp* .)	24"	Yes	25'X10'	Good	Fair	Good	8'	High -Within grading limits	R.I.	
T18 (No tag)	peach (*Prunus spp* .)	4"	No	8'X6'	Poor	Poor	Poor	N/A	High -Within grading limits	R.I.	
T19 (No tag)	apple (*Malus spp.*)	5"	No	10'X10'	Poor	Poor	Poor	N/A	High -Within grading limits	R.I.	
T20 (No tag)	walnut *(Julgans spp* .)	5"	No	12'X10'	Good	Fair	Fair	8'	High -Within grading limits	R.I.	
T21 (No tag)	silver maple (*Acer saccharinum*)	13",10", 10",8",6"	No	45'X40'	Fair	Fair	Fair	18'	High -Within grading limits	R.I.	Co-dominant trunks at 1' above grade.
T22 (No tag)	silver maple	12"	No	40'X15'	Fair	Fair	Fair	12'	High -Within grading limits	R.I.	
T23 (No tag)	coast redwood (*Sequoia sempervirens*)	24"	Yes	60'X15'	Good	Good	Good	18'	High -Within grading limits	R.I.	15' from fence line to west.

Kurt Fouts
Arborist Consultant
826 Monterey Avenue
Capitola, CA 95010
831-359-3607
kurtfouts1@outlook.com

5/15/2020

APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A.*

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:

High: Development elements proposed that are located within the Tree Protection Zone that would severely impact the health and /or stability of the tree. The tree impacts cannot be mitigated without design changes. The tree may be located within the building footprint.

Moderate: Development elements proposed that are located within the Tree Protection Zone that will impact the health and/or stability of the tree and can be mitigated with tree protection treatments.

Low: Development elements proposed that are located within or near the Tree Protection Zone that will have a minor impact on the health of the tree and can be mitigated with tree protection treatments.

None: Development elements will have no impact on the health and stability of the Tree.

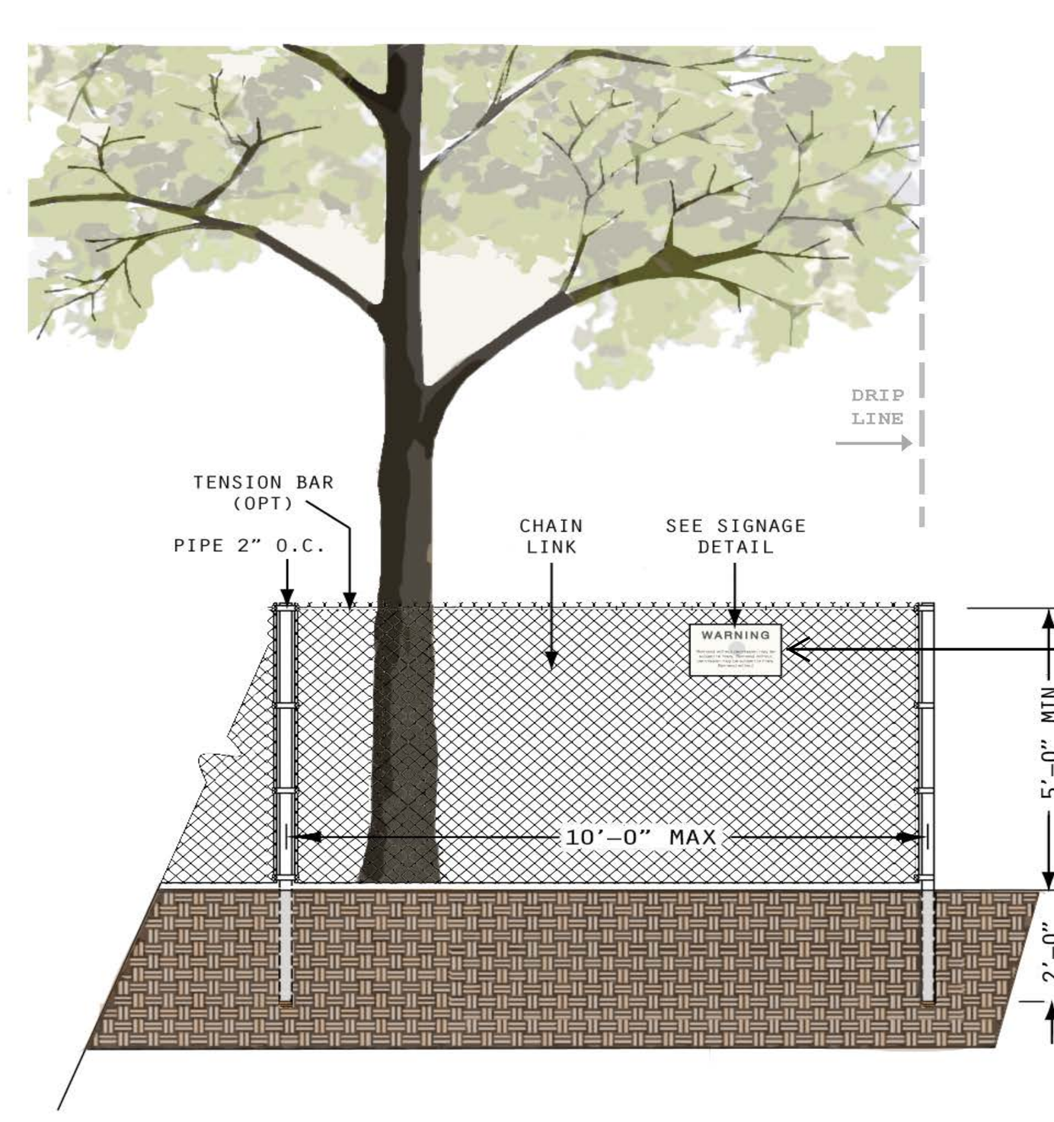
Tree Protection Zone (TPZ):

Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, particularly during construction or development.

Tree Location Map
Ocean Street, Hubbard Street & May Avenue

K.F. 5/15/2020

Legend
Tree Location
Tree Protection Fencing
Tree Canopy Extents
Hand Trenching & Root Pruning
Remove Tree
MAY STREET
(FORMERLY SANTA CRUZ STREET, 50' WIDE)
HUBBARD STREET
(50' WIDE)
OCEAN STREET
(100' WIDE)
WATER STREET
(WIDTH VARIES)
APN 008-331-02
STOTT TRUST
APN 008-331-36, -37
ALVAREZ 2009 TRUST
APN 008-331-28
BOGAARD FAMILY TRUST
APN 008-331-45
DAMS TRUST
APN 008-331-49
JOHNSON TRUST
APN 008-331-48
JOHNSON TRUST
T16 BLACKWOOD ACACIA
DBH 16",16",16"
T17 FAN PALM
DBH 24"
T18 PEACH
DBH 4"
T20 WALNIT
DBH 5"
T19 APPLE
DBH 5"
T4 LONDON PLANE
DBH 15"
T3 LONDON PLANE
DBH 16"
T 13 WILLOW
DBH 14"
T14 WILLOW
DBH 15"
T12 PLUM
DBH
T5 HIMALAYAN BIRCH
DBH 6"
T11 WALNUT
DBH 18",14"
T10 PRIVET
DBH 6",6"
T7 PLUM
DBH <6"
T9 PITTOSPORUM
DBH <6"
T6 WALNUT
DBH 7",7"
T8 ITALIAN STONE PINE
DBH 16"
T1 RED OAK
DBH 7"
T2 LONDON
PLANE
DBH 17:
T21 SILVER MAPLE
DBH 13",10",10",8",6"
T22 SILVER MAPLE
DBH 12"
T23 COAST REDWOOD
DBH 24"
GRAPHIC SCALE
30 0 30 60



TREE PROTECTION FENCE DETAIL
ELEVATION VIEW

Warning

Tree Protection Zone

Keep Out

NOTICE: PROTECTIVE FENCING IS REQUIRED ON THIS JOB SITE.
NO STORAGE OF MATERIALS OF ANY TYPE IS ALLOWED WITHIN THE FENCED AREA.

This sign must be prominently displayed. Fencing may not be moved or removed without permission of the Project Arborist.
Failure to comply with all precautions may result in a STOP WORK order being issue by the regulating agency.

No Entry without Project Arborist Authorization
Kurt Fouts –Arborist Consultant- 831 – 359 -3607

For additional tree assessment information refer to arborist report dated 5/15/2020.

Base map provided by BkF Engineers, San Jose, CA

Kurt Fouts
Arborist Consultant

BIKE PARKING CALCULATIONS		
		REQUIRED
Commercial: 2+15% auto parking requirement		10
	20% Class 1 required	2
	80% Class 2 required	8
Residential	one per four units: class 2	102
Total required		**112**
Garage bike rack	class 2	50
Bike rack along Ocean St sidewalk	class 2	20
Bike rack next to utilitie room	class 2	53
Bike rack in the lobbies (9 each)	class 1	18
Bike rack at May Ave entries (11 each)	class 2	22
Total provided		**163**
per section 24.12.1520 #6, as 200 CF storage per unit is provided, class one bike parking per unit is not provided		

1 FIRST FLOOR PLAN

SCALE: 1/16"=1'-0"

SCDC
ARCHITECTURE
INTERIOR DESIGN
SALVATORE CARUSO
DESIGN CORPORATION
980 EL CAMINO REAL,#200, SANTA CLARA, CA 95050
TEL. No. (408) 998-4087 • FAX. No. (408) 998-4088

CLIENT :

PROJECT :

Ocean Place

908 Ocean St
Santa Cruz, CA

GENERAL NOTES :

1. THIS SHEET IS PART OF A SET & IS NOT TO BE USED ALONE.
2. THIS SHEET IS NOT FOR CONSTRUCTION UNTIL THE ARCHITECT'S STAMP & SIGNATURE ARE ON THIS SHEET
3. THESE PLANS & PRINTS ARE OWNED BY THE ARCHITECT & ARE FOR USE ON THIS PROJECT ONLY. REPRODUCTION AND/OR DISTRIBUTION WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT IS FORBIDDEN.
4.

SHEET NAME :

FIRST FLOOR PLAN

REVISIONS	BY

DRAWN:

CHECKED:

DATE: 11/08/19

SCALE: 1/16" = 1'-0"

JOB No.: 18.10.03

SHEET No.: A2.1

SHEETS IN SET

BIBLIOGRAPHY

Matheny, N. and Clark, J. Trees & Development – A Technical Guide to Preservation of Trees During Land Development. Champaign, IL: International Society of Arboriculture c. 1998

Costello, L.R., Watson, G., Smiley E.T. Root Management – Best Management Practices, Champaign, ILL: International Society of Arboriculture c. 2017

ANSI Board of Standards Review. A.N.S.I. (*American National Standard*) A300 (Part 8)- 2013 Root Management

Harris, R.W., Clark, J.R. and Matheny, N.P. Arboriculture: *Integrated management of landscape tree, shrubs, and vines*. 4th ed. Upper Saddle River, NJ: Prentice-Hall, Inc. c.2004

Matheny, N. and Clark, J. Evaluation of Hazard Trees in Urban Areas. Champaign, IL: Wadley Graphix Corp. c.1994

Smiley, E.T., Matheny, N., Lilly, S. Tree Risk Assessment – Best Management Practices, Champaign, ILL: International Society of Arboriculture c. 2011

Costello, L., Perry, E., & Matheny,N, Abiotic Disorders of Landscape Plants: *A Diagnostic Guide* Oakland, CA:UC/ANR Publications (Publication 3420) c.2003.

Glossary of Terms

Basal rot: decay of the lower trunk, trunk flare, or buttress roots.

Canker: Localized diseased area on stems, roots and branches. Often sunken and discolored.

Critical Root Zone (CRZ): Area of soil around a tree where a minimum number of roots considered critical to the structural stability or health of the tree are located. CRZ determination is sometimes based on the drip line or a multiple of the DBH, but because root growth can be asymmetric due to site conditions, on-site investigation may be required.

Codominant branches/stems: Forked branches (or trunks), nearly the same size in diameter, arising from a common junction and lacking a normal branch union, may have included bark.

Crown: Upper part of a tree, measured from the lowest branch, including all branches and foliage.

Defect: An imperfection, weakness, or lack of something necessary. In trees defects are injuries, growth patterns, decay, or other conditions that reduce the tree's structural strength.

Diameter at breast height (DBH): Measurement of trunk diameter at 4.5 feet above grade.

Frass: Fecal material and/or wood shavings produced by insects.

Included Bark Attachments (crotches): Bark that becomes imbedded in a crotch (union) between branch and trunk or between codominant stems. Lacks axillary wood and causes a weak attachment.

Live Crown Ratio (LCR): Ratio of the height of the crown containing live foliage to overall height of the tree.

Scaffold branches: Permanent or structural branches that form the scaffold architecture or structure of a tree.

Suppressed: Trees that have been overtopped and occupy an understory position within a group or grove of trees. Suppressed trees often have poor structure.

Tree Protection Zones (TPZ): Defined area within which certain activities are prohibited of restricted to prevent or minimize potential injury to designated trees, especially during construction or development.

Trunk flare: Transition zone from trunk to roots where the trunk expands into the buttress or structural roots.

This Glossary of Terms was adapted from the *Glossary of Arboricultural Terms* (ISA, 2015)

Appendix G - TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

1) Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced- off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.

2) If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.

3) Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.

4) Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.

5) Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.

6) Compaction of the soil within the tree protection zone shall be avoided.

7) Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.

8) Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.

9) Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.

10) Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.
A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal: The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six -foot chain link fence mounted on eight - foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman's Compensation insurance.

Development Site Tree Health Care Measures

RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. 'Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.

City of Santa Cruz

9.56.040 HERITAGE TREE AND HERITAGE SHRUB DESIGNATION.

Any tree, grove of trees, shrub or group of shrubs, growing on public or private property within the city limits of the city of Santa Cruz which meet(s) the following criteria shall have the “heritage” designation:

(a) Any tree which has a trunk with a circumference of forty-four inches (approximately fourteen inches in diameter or more), measured at fifty-four inches above existing grade;

(b) Any tree, grove of trees, shrub or group of shrubs which have historical significance, including but not limited to those which were/are:

(1) Planted as a commemorative;

(2) Planted during a particularly significant historical era; or

(3) Marking the spot of an historical event.

(c) Any tree, grove of trees, shrub or group of shrubs which have horticultural significance, including but not limited to those which are:

(1) Unusually beautiful or distinctive;

(2) Old (determined by comparing the age of the tree or shrub in question with other trees or shrubs of its species within the city);

(3) Distinctive specimen in size or structure for its species (determined by comparing the tree or shrub to average trees and shrubs of its species within the city);

(4) A rare or unusual species for the Santa Cruz area (to be determined by the number of similar trees of the same species within the city);

(5) Providing a valuable habitat; or

(6) Identified by the city council as having significant arboricultural value to the citizens of the city.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
2. The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
7. Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.
10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education. Knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees, Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

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

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

Kurt Fouts
Arborist Consultant
826 Monterey Avenue
Capitola, CA 95010
831-359-3607
kurtfouts1@outlook.com

MEMBER
INTERNATIONAL SOCIETY OF ARBORICULTURE
ISA
™