# DEPARTMENT OF PUBLIC WORKS TREE MAINTENANCE ACTIVITIES PERFORMED AND PENDING

**MAY 2012** 



Page 1 of 3

ADDRESS	TYPE OF TREE	DIAMETER	ALTERED (TRIM)	REMOVED	COMMENTS
5 Miller Ave	Monterey Pine	54.4-in DBH (171-in CBH estimated		Top removed, remainder pending PG&E strain guy relocation	Private – still requires PG&E coordination – no permit required (undesirable tree).
ROW at 254 Glen Drive	Pittosporum Quercus	37.7-in CBH	Decision: View Claims Valid 31JAN12 Decision appealed 9FEB12 23FEB12		TRP 11-174 (Pittosporum) & TRP 11-394 (Quercus) received. View claim found valid. Decision appealed. Appeal pending.
ROW – Intersection between Sausalito Blvd & Spencer Ave on 40 Cooper Lane	Black Acacia	72" DBH 78" DBH			Co-dominant trunks lean away from each other. 1 trunk leans over Spencer Ave; the other is a threat to property at Cooper Lane. Bartlett Tree exposed root collar, ivy & soil removed from bottom of tree to determine risk of failure. Two arborist reports, 1 from homeowner. Not a hazard. Pending.

### TREE MAINTENANCE ACTIVITIES PERFORMED AND PENDING MAY 2012 **DEPARTMENT OF PUBLIC WORKS**



Page 2 of 3

<u>ADDRESS</u>	TYPE OF TREE	DIAMETER	ALTERED (TRIM)	REMOVED	COMMENTS
ROW at 506 Olive Street	DEDICATED  Monterey Pine (see Memorandum with 2FEB12 packet)			Pending	Arborist Report from Bartlett Tree. Dedicated tree dying from bark beetles. Possibility of root damage and/or soil compaction resulted from construction adjacent. Women's Club notified. Posted 1/24/12. Removal pending, DPW Director to advise TVC of date certain.
Richardson Ave	1) Victorian Box Tree			Pending	Tree root uplifted portion of sidewalk 6". Requested removed by resident as trip hazard for pedestrians. Removal pending (as walkway would have to be rebuilt; major roots would have to be cut, compromising tree's health & stability). Tree posted 4/23/12. Arborist report.

### TREE MAINTENANCE ACTIVITIES PERFORMED AND PENDING **DEPARTMENT OF PUBLIC WORKS**

Page 3 of 3		MAY	MAY 2012		
ADDRESS	TYPE OF TREE	DIAMETER	ALTERED (TRIM)	REMOVED	COMMENTS
ROW at 4 Harrison Ave/17 Bulkley Ave	1) Coast Live Oak	32″ DBH	Pending		25% routine pruning requested. Tree posted 5/14/12. Arborist report.
ROW at 42 & ½ Caledonia	2) Indian Laurel Fig	CBH 8'5" (only one tree measured)		Pending	Large tear in main trunk where limb has failed. Pending removal by City. Arborist report and a second arborist report is pending.
ROW at 225 Locust Street	1) Stone Pine			Pending	Tree destroying private property fence surrounding lot. Tree also is camel-humping roadway & parking in spots. Posted 5/15/12. Removal pending. No arborist report.
ROW at 38 Lower Crescent Ave	1) Coastal Live Oak	8.6" DBH		Pending	Tree trunk decay is 90% of canopy & 98% of tree is dead. Removal pending 5/31/12. Arborist report.

### DEPARTMENT OF PUBLIC WORKS TREE MAINTENANCE ACTIVITIES PERFORMED AND PENDING

JUNE 2012



Page 1 of 4

72" DBH 78" DBH	Black Acacia 72" DBH 78" DBH 78" DBH 18" DBH 1

# DEPARTMENT OF PUBLIC WORKS TREE MAINTENANCE ACTIVITIES PERFORMED AND PENDING JUNE 2012



Page 2 of 4

COMMENTS	Arborist Report from Bartlett Tree. Dedicated tree dying from bark beetles. Possibility of root damage and/or soil compaction resulted from construction adjacent. Women's Club notified. Posted 1/24/12. Removal approved, DPW Director to advise TVC of date certain.	Tree root uplifted portion of sidewalk 6". Requested removed by resident as trip hazard for pedestrians. Removal pending (as walkway would have to be rebuilt; major roots would have to be cut, compromising tree's health & stability). Tree posted 4/23/12. Removed by City crew. Arborist report.
REMOVED	Pending	Completed 6-6-12
ALTERED (TRIM)		
DIAMETER		
TYPE OF TREE	DEDICATED  Monterey Pine (see Memorandum with 2FEB12 packet)	1) Victorian Box Tree
ADDRESS	ROW at 506 Olive Street	Richardson Ave

# DEPARTMENT OF PUBLIC WORKS TREE MAINTENANCE ACTIVITIES PERFORMED AND PENDING JUNE 2012



Page 3 of 4

COMMENTS	25% routine pruning requested. Tree posted 5/14/12. Trimmed by Urban Forestry. Arborist report.	Large tear in main trunk where limb has failed. Pending removal by City. Arborist report and a second arborist report is pending.	Tree destroying private property fence surrounding lot. Tree also is camel-humping roadway & parking in spots. Posted 5/15/12. Private removal. No arborist report.	Trunk decay is 90% of canopy & 98% of tree is dead. Private removal. Arborist report.
REMOVED		Pending	Completed 6-7-12	Completed 5-23-12
ALTERED (TRIM)	Completed 5-30-12			
DIAMETER	32" DBH	CBH 8'5" (only one tree measured)		8.6" DBH
TYPE OF TREE	1) Coast Live Oak	2) Indian Laurel Fig	1) Stone Pine	1) Coastal Live Oak
<u>ADDRESS</u>	ROW at 4 Harrison Ave/17 Bulkley Ave	ROW at 42 & ½ Caledonia	ROW at 225 Locust Street	Crescent Ave

# DEPARTMENT OF PUBLIC WORKS TREE MAINTENANCE ACTIVITIES PERFORMED AND PENDING JUNE 2012



Page 4 of 4

<u>ADDRESS</u>	TYPE OF TREE	DIAMETER	ALTERED (TRIM)	REMOVED	COMMENTS
Drive 53 Glen	DEDICATED  1) Moraine Locust	21.6" CBH	Pending		Leaning stem over stairway entrance to residence. Four large limbs growing out of a central stump, needs risk reduction of leaning stem. Owner wants City to be responsible for \$2500 cost. Arborist report from Ed Gurka with corrective recommendations to prune then cable the leaning stem to tree's other stems to increase
ROW at 1001 Bridgeway	1) Myoporum			Completed 6-1-12	Emergency removal. Trunk of tree had a 4" split. Removed by city crew. No arborist report.



### BARTLETT TREE EXPERTS

60 Hoag Avenue, San Rafael, CA 94901 • Telephone 415-472-4300 • Fax 415-472-8650

April 19, 2012

City of Sausalito Department of Public Works Attn: Kent Basso 530 Nevada St. Sausalito, CA 94965

**RE:** Victorian Box (*Pittosporum undulatum*) located in front of 417 Richardson St in Sausalito.

Dear Mr. Basso:

Per your request, on Thursday, April 19, 2012, I inspected the Victorian Box tree located in front of 417 Richardson St in Sausalito. The objectives of the inspection were to evaluate the current safety and health condition of the trees and to determine the effects that the walkway repair may have on the trees.

The Victorian Box tree appears to be in good health with a full, healthy canopy along with well-spaced scaffold branches. The root collar of the tree is properly exposed. There is a pocket of decayed at about 5 feet up from the base of the tree that was formed where a branch was removed several years ago. No other signs of decay or other defects were evident at the time of the inspection (Picture 1).

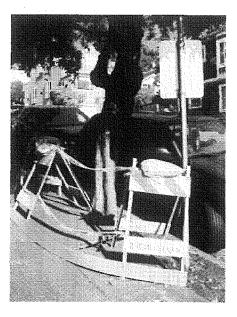


Picture 1. Victorian Box (Pittosporum undulatum) located in front of 417 Richardson St.

THE F.A. BARTLETT TREE EXPERT COMPANY SCIENTIFIC TREE CARE SINCE 1907



The roots of the Victorian Box overgrew the space where it was planted and some roots have cracked and lifted the walkway that runs along Richardson St, making a trip hazard for pedestrians (Picture 2).



**Picture 2.** The side walk in front of 417 Richardson St is cracked and uplifted by the roots of the Victorian Box tree planted next to it.

As a general rule, roots that are within the drip line of the trees should not be cut. If this is not feasible, roots that are within three times the diameter at breast height of the tree should not be touched. The closer construction activities happen to the base of the trees, the more the likelihood for the trees to negatively respond to such disturbances, thus affecting the trees' health and stability.

Since the walkway in front 417 Richardson St will have to be rebuilt, major roots will have to be cut close to the trunk, compromising the trees' health and stability. Therefore, the removal of the trees is recommended to eliminate any potential risks of the tree failing as a result of this repair project.



**Picture 3.** In order to repair the walkway, roots will have to be cut back at the base of the tree, compromising the tree's stability and safety.



Please contact me directly if you have any questions or concerns regarding this report.

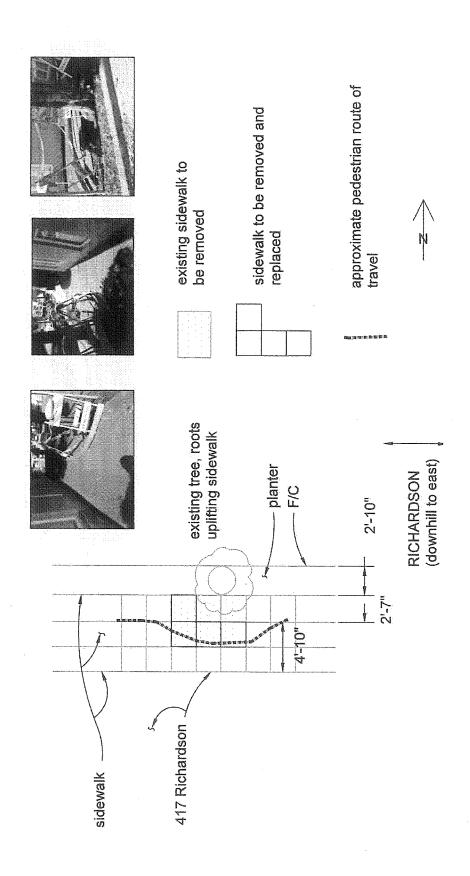
Sincerely,

Juan M. Ochoa

ISA Board Certified Master Arborist WE-6480B

Bartlett Tree Experts Tel: (415) 472-4300 x 18 Fax: (415) 472-8650

jochoa@Bartlett.com



\*ublic Works\Enaineering Division\Personal Folders\andy\land devmt prois\417 richardson\417 rich



### FIELD REPORT

Client Information Inspection Date 8 Willow Street, San Rafael, CA 94901 Tel: 415 454-4212 Fax: 415 454-4218 11/30/11 3318141 arborforestry@sbcglobal.net Ture! #3 Harrison ISSUE/PURPOSE OF INSPECTION: Trimming for Solar Heress + VIEW- City Tree-#3 Harrison Species! coast Live Oat (Quercus agrifalia) Sizzi = 32"DBH = Heritage Tree A. OBSERVATIONS Z B. CONCLUSIONS E C. RECOMMENDATIONS IZ-A. Observations 1) Located adjacent to paved road (6"). 2) Bifurcates into two spars at 5.5'a.g.
3) Previously crown reduced - some branches had heading cats. 4) There is a lot of internal foliage, B. Conclusions;
The tree is healthy trigorous. A few small branches have declined due to improper fruning;
The tree would tolerate crown reduction, Recommendations: Progressive crown reduction I Ent back foliase bearing things to & foliage reduction Repeat the following years List is your invoice. The fee for this consultation is due and Additional work needed payable upon receipt. This fee is not contingent on any particular outcome or third party event. This fee is for services rendered to date. Hours Additional consultation (verbal or written), court appearances, depositions or any other services will be additionally billable. Misc. Charges Cart, For oster #241 Arborist Name: AMOUNT DUE Arborist Signature:



8 Willow Street, San Rafael, CA 94901 Tel: 415-454-4212 Fax: 415-454- 4218 arborforestry@sbcglobal.net Field Report

Client: D	a un c	er, Bert
Page: Z	of Z	Date: // /50/11
Project:	OWN	RESECTION
52/	View	ot Cety Tree

2) "Crown reduction" (ISA, BMAP.) withdrop crotch pruning of Twigs and small branches will stimulate lower spront growth, The small branches and twigs may then be cat back further in successive annual pruhings to restore more view.

3) Do not remove more than 30% of the foliage from any given branch or more than 25% of the foliage from the tree as a whole in any one praning (in any given growth year):

4) The tree should be inspected by the consulting arborist prior to the second praning/crown reductions.

5) COUNT, F. Recommends summer premius for sounds

[3t Progressing Water Prior to

year znd year Progressive Crown Reduction

from a regrowth all tools and other equipment would have to be sani-

Spring flush

LIMITATIONS:

The health and hazard assessments in this report are limited by the visual nature of the assessment. Defects may be obscured by aerial foliage, branches, multiple trunks or other trees. The probability of tree failure is dependent on a number of factors including: topography, geology, soil characteristics, wind patterns, species characteristics, structural defects (both visually evident and concealed), and the characteristics of a specific storm. Structurally sound, healthy trees are wind thrown during severe storms. Consequently, a conclusion that a tree does not require corrective surgery or removal is not a guarantee of soil in the factors.





Ed Gurka, Consulting Arborist
Member, American Society of Consulting Arborists

Member, International Society of Arboriculture Certified Arborist, Western Chapter, # 0418

April 18, 2012

### Arborists Disclosure / Performance of Services

<u>Disclosure</u>. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of the trees and attempt to reduce the risk of living near trees. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Since trees are living organisms, conditions are often hidden within the tree and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specific period of time. Likewise, remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees is to eliminate all of the trees.

<u>Performance of Services / No Warranty.</u> Consultant shall perform its services in a manner consistent with the standard of care and skill ordinarily exercised by members of the profession practicing under similar conditions in the geographic vicinity and at the time the services are performed, and use reasonable efforts to comply with all laws, rules and regulations of any governmental or regulatory agency applicable to the Services. No warranty, representation or guarantee, express or implied, is intended by this Agreement. Consultant is not responsible for the completion or quality of work that is dependent upon or performed by Client or third parties not under the direct control of Consultant or for their acts or omissions or for any damages resulting there from.

### ASSUMPTIONS AND SCOPE OF WORK:

The recommendation provided in this report is based on a Level 2 Basic, Risk Assessment Classification<sup>1</sup>. The Basic Assessment Process uses the following criteria.

### Level 2 Basic Assessment Process

- 1. Locate and Identify tree to be assessed.
- 2. Determine the targets and target zone for the tree or branches of concern.
- 3. Review the history and conditions, and species failure potential.
- 4. Assess potential load on the tree and its parts.
- 5. Assessing general tree health
- 6. Inspecting the tree visually and using binoculars, mallet, probes, or shovels, as desired by the arborist or as specified in the scope of work.
- 7. Record observations of site condition, defects, and outward signs of possible internal defects, response to growth.
- 8. If necessary recommend an advanced assessment.
- 9. Analyzing to determine the likelihood consequences of failure in order to evaluate the degree of risk.
- 10. Develop mitigation options and estimate residual risk for each option.
- 11. Develop and submit the report/documentation, including, when appropriate, advice on re-inspection intervals.

<sup>&</sup>lt;sup>1</sup> See Arborist News Volume 21 Number 2 April 2012 issue, pg. 15. ANSI A300 Tree Risk Assessment, a. Tree Risk Structure Assessment.

### Arborist Report, 42<sup>1</sup>/<sub>2</sub> Caledonia Street Ficus Tree City of Sausalito, Sausalito, California Prepared by Ed Gurka, Consulting Arborist Services

### ASSIGNMENT:

I received a request to assess the condition of a Sausalito, Caledonia Street tree following failure of a large diameter limb. The failure resulted in property damage to a parked vehicle. This report will discuss the current risk conditions of the tree and provide a recommendation to reduce liability. Risk assessment is at a Level 2 Classification referred to in the scope of work.

### HISTORY:

In 1989 during the hard freeze that dropped the temperature into the teens in Sausalito many of the *Ficus retusa nitida*, Laurel Fig street trees sustained a freeze burn. The trees, 95 percent dead, required their removal and replacement with other trees. A very few of the Ficus trees were trimmed severely and allowed to re-grow in the understanding that as the remaining Ficus trees produced re-growth they would be vulnerable to limb breakage.

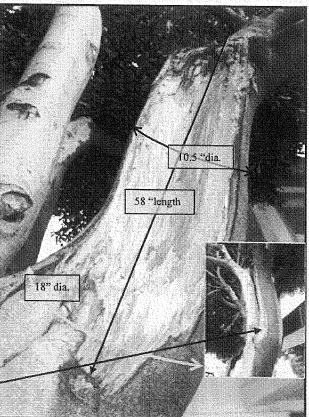
### **OBSERVATIONS** and **DISCUSSIONS**:

A site visit to collect information was performed on April 13, 2012. The tree is a mature *Ficus*, *retusa*, *nitida*, Indian Laurel Fig. The Ficus tree is located in a sidewalk tree well at 42 ½ Caledonia Street. The Circumference at Breast Height (CBH) is 8 feet 5 inches or 102 inches. The canopy height is 42 feet and spread is 50 feet. The Sausalito Tree Ordinance describes this tree as a protected tree based on CBH and the location in the public right of way.

The Ficus tree has a large tear in a remaining scaffold limb on the street side of the canopy. This is where the limb failure occurred in February 2012. A measurement was made to determine the remaining circumference of the scaffold limb. Diameter just below the tear measured 18 inches, and at the center of the tear, 10.5 inches. The holding wood supporting the weight of the foliage and remaining limbs is now at 42 percent.

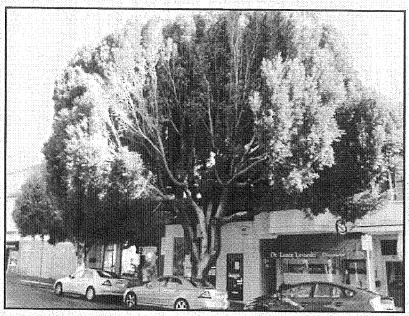
When measuring wound, the length is an important factor. The length determines the exposure. Wound exposure is the ability to prevent environmental influences from attacking the tree's defense mechanism's and health over time. In this description, there are factors that require serious and immediate consideration. The tree is located in a high-use area with constant pedestrian traffic and public parking 24 hours a day and a main thoroughfare within the central location of emergency services for the City.

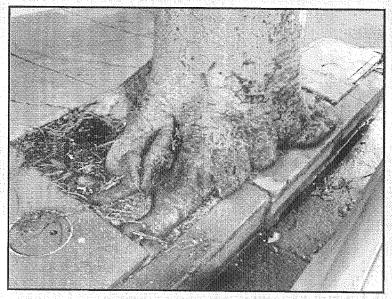
Arrows in the photograph depict the extent of the tear wound. Inset photograph is a side view of the wound with 42% remaining holding wood.



The broken scaffold limb resulted in a large hole in the canopy shape over Caledonia Street. In the photograph and when visiting the site, the extended length of remaining limbs and end weight exerted on the attachment points explains why the failure occurred and that the occurrence will be repeated. The heavy end weight is not sustainable by the scaffold limb attachments.

An additional concern is the restricted space this tree is required to produce growth. The canopy is off balance by the limitations of the row of two-story buildings. All growth is positioned over the Caledonia sidewalk and street.





A direct area of a tree is the base where the root system attaches to the main trunk. The root system supports the above ground mass and provides the main support structure. Therefore, this area required inspection for any abnormalities. Since this tree is surrounded by pavement and only the immediate root trunk crown is visible from a very small tree well opening inspection is very limited.

The inspection revealed that the trunk and root system existed in a very restricted and limited area. The root trunk crown has overgrown the opening and is being girdled by the concrete curb and sidewalk. The root system and especially buttress roots are cracking and lifting the sidewalk pavement. Since the root system that supports the tree cannot expand laterally, it

is lifting the surrounding area by pushing upwards. This is of concern because at some point the root system that provides support for the tree will reach a critical point causing the tree to topple. Since the balance of the tree is offset with all the weight over the street, it is most likely the direction of the fall. At the measured height of 42x50 feet, it will cover all the width of Caledonia Street. This is a large target area and would result in a high probability of damage.

Given the limited root inspection discoveries, lifting and cracking of the sidewalk and the limited, restricted space for root development, and the imbalanced canopy the potential for tree failure is above a moderate chance of complete failure. If wind gusts at the strength of the one that produced the limb failure occurred, the root system may not be adequate to support the tree.

Arborist Report, 42<sup>1</sup>/<sub>2</sub> Caledonia Street Ficus Tree City of Sausalito, Sausalito, California Prepared by Ed Gurka, Consulting Arborist Services

### **RECOMMENDATIONS:**

End weight on remaining limbs is critical; the probability of a second limb failure is high. The occupancy rate in the tree location is moderate to high dependent on time of day. It is very likely that street parking is constant. Thus, property damage is most likely, however, personal injury is considered high because of the commercial businesses in the immediate area. It is not practical to propose pruning alterations to mitigate these conditions and eliminate the risk. The tree would require severe pruning that would produce additional long-term problems that would eventually result in a similar limb failure.

A complete tree failure is very likely based on site visit discoveries. The Ficus tree roots exist in a restricted space to develop properly. The lifting, crack, and displacement of sidewalk pavement surrounding the tree is that proof. The canopy is very heavy and off balance because of restricted space of the 2 story-building walls. A complete tree failure will be more catastrophic. Caledonia Street will be blocked; personal property will likely be damaged, and most important, people in the vicinity can be injured if struck by any part of the tree failure. The recommendation is that the Ficus is removed to eliminate the risk of failure. When a consensus decision is made, a tree replacement plan should be considered based on public demand and requests.

### SUMMARY:

The Ficus tree has outgrown this location and is not intended for such a restricted space. The trunk base overlapping the tree well cutout for a street tree confirms this. The building wall directly against the canopy is causing the tree to have unbalanced weight over the street. The Registry of Big Trees lists two *Ficus marcophylla* species with measurements of 76 feet tall, 171 ft. canopy, and a girth of 507 inches, in Santa Barbara and the other of 76 feet tall, 123 ft. canopy, girth of 400" in Balboa Park, San Diego. The compared present size of the Caledonia Street tree is approximately one-third the size of the two cited from the Registry of Big Trees.

Root damage potential is related as high. The tree was not intended to be planted in such a small tree well with the root zone surrounded by pavement. These conditions are impossible for healthy root growth. As the tree continues to grow, and it does not fail, the root system will continue to displace pavement, making passage more difficult.

Branch strength is rated as medium weak. The heavy weight on the branch ends are directly related to the recent branch failure. These conflicts will continue to increase risk as the tree grows greater in mass. The most logical solution is the removal of the tree.

Ed Gurka Consulting Arborist Services



JAN 18 2011



Ed Gurka, Consulting Arborist CITYOFSAUSALITO

Member, American Society of Consulting Arborists Opagen

International Society of Arboriculture Certified Arborist #418

ISA

Arborist Report, 38 Lower Crescent Avenue, Sausalito, California

Prepared by, Ed Gurka, Consulting Arborist Services San Rafael, California

> Exhibit B [16 pages]

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,	Recommendations	Remove Immediately a high risk of failure.	Limit canopy pruning. Treat for Sudden Oak Disease using Agrifos/Pentera Bark treatments fertilize with complete and fertilizer annually in spring. Monitor for any change in condition.	Remove Immediately a high risk of failure.	Treat with Agrifos/Pentra Bark to prevent Sudden Oak Disease. Monitor for any changes annually.	Monitor for advancement of decay annually. Remove all watering at base of trunk. Sparse canopy due to pruning. Allow lower canopy to develop. Treat with Agrifos/Pentra Bark annually to prevent Sudden Oak Disease.	Spray treatments annually with Agrifos/Pentra Bark to prevent Sudden Oak Disease.
2.3,2010	Removal Priority 1 - No Removal 2 - Low possibility 3 - Possible removal 4 - Remove 5 - High removal	တ	-	ಬ	<del></del>	<del>-</del>	~
Tree Inventory, 38 Lower Crescent Avenue, Sausalito CA. 12.3.2010	Comments	Located on the public right of way immediately next to the street near the neighboring property boundary. Trunk decay is 90 % canopy is 98% dead. Potential for failure very high.	Upper canopy sap sucker holes. Canopy sparse estimated at 60%.	Lower decay on west side of trunk. 75 % of circumference infected. Condition cannot be reversed with treatments. Lean over home at a 54° angle and then corrects to upright. Tree canopy sperse due to Armilliara disease.	None visible Decay pocket on North side of trunk at 8 ft. above on lower ground. 48° lean. Reduce weight by pruning over lean. trunk.	Tree located to left of entrance to home. Nine inch decay pocket @ 12 inches above trunk base.	Trunk inspection did not reveal any visible decay.
/, 38 Lov	. Disease notation	very heavy trunk decay		Armilifara fungus	None visible on lower trunk.		
Inventory	Condition Rating 1=Excellent 2=Good, 3= fair, 4=poor, 5=very poor or dead	5	83	4	2	N	Ci
Tree	Height	12 feet	25'	25'			
	Circumfer ence at Breast Height (CBH) at 24 Inches from ground level	8,6 inches	2'5" (29 in.)	169.2" (40.2 in.)	4'5,5" (53,5 in.)	4'5" (53 in.)	2'6" (30 in.)
	Location (GPS)	N 37, 50.981° W 122, 29.058°	N 37.50.981° W 112.29.058°	N 37.50.983°. W 112.29.058°	N 37,50.985° W 122.29,056°	Quercus agrifolia N 37. 50.54.987° Coast Live Oak W 122.29.055	N 37.50.987° W 122.29.052°
	Species	Quercus agrifolia Coast Live Oak	Quercus agrifolia Coast Live Oak	Quercus agrifolia Coast Live Oak	Quercus agrifolla Coast Live Oak	Quercus agrifolia   Coast Live Oak	Quercus agrifolia Coast Live Oak
	Tree Tag Number	apron	7	က	4	2	9

Page 5 of 17 I





Ed Gurka, Consulting Arborist Services Member, American Society of Consulting Arborists Certified Arborist, International Society of Arboriculture, Western Chapter, # 0418

October 16, 2011

### ASSIGNMENT:

I received a request from Mary Casey to provide information on a Locust tree located just above the stairway entrance to her home at 53 Glen Drive, Sausalito, CA. One of the main limbs is over the stairway and appears to have moved lower over the stairway. This report will provide information on the arboricultural method of compensating for the movement.

### **OBSERVATIONS and DISCUSSIONS:**

I met with Mrs. Casey at 53 Glen Drive on October 7, 2011, to collect information and assess the tree's condition. The tree is described as a *Gleditsia tricanthos*, Moraine Locust, of special significance because it is a thornless and fruitless variety of the Locust family. The tree tolerates a wide variety of soils, temperatures, is wind resistant, and relatively pest and disease free. The tree's canopy structure is four stems with a Circumference at Breast Height, (CBH) of 5.1, 5.9, 5.2 and 5.5 feet. The combined CBH is 21.6 feet. This tree is designated as a "Dedicated Tree" of special significance by the Sausalito Women's Club and Sausalito City Council, Ordinance 1114, 11.12.020 <u>DEFINITIONS</u>, <u>Dedicated Tree:</u> A tree that has special significance as provided for by resolution of the City Council.

The limb with a 5.5-foot CBH that extends over the stairway to 53 Glen Drive is leaning at a 28 degree angle. In comparison, the other limbs are leaning at a 10 degree angle. Gleditsia trees have a spreading canopy structure, and therefore, a slight lean is expected.

The limb with the 28 degree lean is partially obstructing passage along the stairway leading to and from the residence. A visual inspection of the stem did not reveal open decay cavities. A basic sounding test was performed to a section of the limb to determine if internal decay could contribute to the lean. Hollow tones were noted at breast height levels, and internal wood decay is suspected on the stem area approximately 4.5 feet above the stem's base. Based on the sounding tests the



Locust tree with leaning stem over stairway 53 Glen Drive.

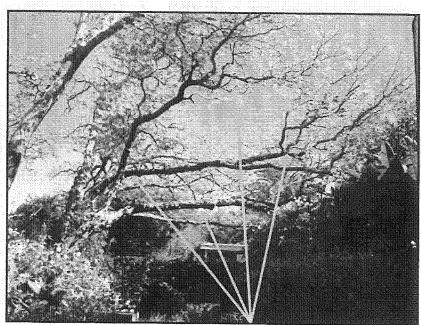
decay area does not appear to be extensive or consume a great deal of trunk area. Sounding tests were performed only to the lower portion of the leaning stem.

### RECOMMENDATIONS:

This Locust tree provides considerable benefits to the property. They are privacy, shading, and a wind break for the front yard. Its attributes are foliage that is light green in the summer and turning yellow in the fall. This mature Locust species has special attributes that were considerations for a "Dedicated Tree" status by special proclamation of the Sausalito City Council. Therefore the focus and appropriate action are for risk reduction of the leaning stem. Corrective measures are possible for its management as opposed to a removal. They are as follows:

To reduce excessive leveraged weight on the leaning stem of the Locust tree, pruning operation shall be performed before cabling installation. Work shall be completed by workers skilled and knowledgeable in pruning weight reduction, and cabling methods.

- A reduction of over-extended scaffold limbs requires end reduction pruning cuts to reduce the excessive leverage at limb attachment points and weight reduction on the leaning main stem. Scaffold limbs shall be reduced selectively by 25 percent where possible and cuts made to side branches that can assume future growth.
- Where similar diameter scaffold limbs are extending distally and in parallel to one another the redundant limb shall be considered for removal. The remaining scaffold limbs shall be pruned for end reduction. These two requirements are recommended to reduce weight on the leaning stem.
- The removal of any dead limbs greater than 1 inch shall be performed to the entire Locust tree canopy.
- ANSI A-300 (Part 1) for Tree Care Operations –
   Tree, Shrub and Other Woody Plant Management – Standard Practices (Pruning) and the Best Management Practices Tree Pruning, the companion



Selective end weight reduction of scaffold limbs. The removals of parallel scaffolds are considered pruning objectives to reduce excessive weight on the leaning Locust tree limb.

publication shall be used as requirements and guidelines for the pruning operation.

To brace and anchor the leaning limb following the pruning operation, cabling the leaning stem to the tree's other stems is recommended to increase stability of the leaning stem. The ANSI A-300 for Tree Care Operations, —Tree, Shrub, and Other Woody Plant Maintenance, Standard Practices, (Support Systems a.

Cabling, Bracing, and Guying) are recommended for this cabling and bracing operation. Page 24, a. Direct, Direct cabling consisting of a single cable between two trees parts, e.g. two stems, is the section of the publication that applies for the work.

### SUMMARY:

Based on the recommended pruning and cabling standards discussed in this report, the result will be improved conditions of the leaning stem over the walkway to the 53 Glen Drive residence. The recommendations presented in this report are intended to preserve this "Dedicated Tree" designated by the Sausalito City Council. In addition to the recommended work of pruning and cabling, monitoring the tree by a Certified Arborist is necessary to document progress and the effect of the recommended work to the Locust tree. Annual inspection is recommended, and if warranted, the time span of inspection can be increased if the tree is stable.

### Contact Information:

Ed Gurka Independent Services 197 Coleman Drive San Rafael, CA. 94901 Mobile: 415 601-5337 Email: Egurka1@aol.com

### Affiliations and Licenses:

International Society of Arboriculture, Certified Arborist # 418, 1984 to present.

American Society of Consulting Arborists, Member, 2000 to present.

California Department of Pesticide Regulation, Pest Control Advisor PCA 74846, 1989 to present.

City of Sausalito, Municipal Arborist, 1989-2004

Independent Consulting Arborist Services, 2004-present