



DATE: December 3, 2014

AGENDA ITEM #5

**TO:** Design Review Commission  
**FROM:** Lily Lim, Assistant Planner  
**SUBJECT:** 14-SC-40 – 444 Mundell Way

**RECOMMENDATION:**

Approve design review application 14-SC-40 subject to the findings and conditions

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**PROJECT DESCRIPTION**

This project will demolish an existing one-story structure and construct a new one-story structure with two accessory structures. The project includes 2,294 square feet in main structure, 195 square feet in the basement, 588 square feet in the detached garage, and 450 square feet in the detached studio. Design Review Commission is required to allow an accessory structure over 12 feet in height within the building envelope. The following table summarizes the project's technical details:

<b>GENERAL PLAN DESIGNATION:</b>	Single-Family, Residential
<b>ZONING:</b>	R1-10
<b>PARCEL SIZE:</b>	19,139 square feet
<b>MATERIALS:</b>	Standing seam metal roof, Hardie plank siding and trim, and wood trellis

	<b>Existing</b>	<b>Proposed</b>	<b>Allowed/Required</b>
<b>COVERAGE:</b>	2,260 square feet	3,438 square feet	6,698 square feet
<b>FLOOR AREA:</b>	1,708 square feet	3,332 square feet	4,664 square feet
<b>SETBACKS:</b>			
Front	25 feet	25 feet	25 feet
Rear	25 feet	25 feet	25 feet
Right side	10 feet	10 feet	10 feet
Left side	10 feet	26 feet	10 feet
<b>HEIGHT:</b>	12 feet	18 feet	27 feet

## **BACKGROUND**

### **Neighborhood Context**

The subject property is located in a Transitional Character Neighborhood, as defined in the City's Residential Design Guidelines. Mundell Way is a narrow cul-de-sac street with a combination of small, older homes and newer, one and two-story homes. The homes have similar setbacks with low profiles and rustic materials, but vary in size. The street has varied landscaping with no distinct street tree pattern.

## **DISCUSSION**

### **Design Review**

In Transitional Character Neighborhoods, good neighbor design reduces the abrupt changes that result from juxtaposing radically different designs or sizes of structures. Proposed projects should not set the extreme and should be designed to soften the transition.

The proposed one-story structure is designed to minimize its change to the neighborhood. The design uses higher wall plates when compared to the adjacent houses. However, the flat roof design keeps the overall height of the main structure low and minimizes the bulk. There is a prominent main entry element on the main structure with transom windows, which help to break up the massing. While the two homes surrounding the project site are older and smaller in scale, the increased side setbacks help to soften the bulk and scale of the taller wall plates.

Typically, one-story design review applications are reviewed administratively; however, the proposed accessory structure is 17 feet in height, which triggers the need for consideration by the Design Review Commission. Per the City's Code, the Design Review Commission may approve an accessory structure located entirely within the main structure's building envelope to extend up to 18 feet in height if the Commission determines that the additional height is necessary in order to establish architectural compatibility with the main structure. The proposed accessory structure uses the same shed roof that can be found on the entry element on the main structure. The overall height of the accessory structure is three inches lower than the overall height of the main structure. Due to the approximate 17-foot setback to the studio, the additional height does not create a concern of mass or bulk.

The project uses high quality materials such as a standing seam metal roof, Hardie plank siding and a wooden trellis, which can be well integrated into the transitioning neighborhood.

### **Privacy and Landscape**

The Design Guidelines suggest placing windows, decks and doors in such a way to minimize the privacy impacts to neighboring properties. There are three proposed decks; the first is located to the rear of the main structure, the second is located between the detached garage and the main structure and the third is between the studio and the main structure. Due to the location and setbacks to the property lines, the proposed decks do not create an unreasonable privacy concern.

This project will remove 12 trees (trees No. 1-12). The trees include one Almond, one Bay Laurel, two Hollywood Juniper, three Deodar Cedar, one Coast Live Oak, one Monterey Pine, one Chinese Pistache, one English Walnut, and one Black Acacia. All of the trees being removed are in fair to poor condition. The most significant in size are tree numbers 5, 6, and 12. The tree inventory list in the attached arborist report identifies all species of trees on the property. Staff has added a condition to correct and revise the unknown trees on sheet A100 of the drawings.

The remaining trees will be retained and additional landscaping is proposed throughout the property. The new landscaping meets the street tree guidelines which include two Strawberry trees and two Spring Snow Crabapple trees in the front yard.

## **ENVIRONMENTAL REVIEW**

This project is categorically exempt from environmental review under Section 15301 of the Environmental Quality Act because it involves an addition to an existing single-family dwelling in a residential zone.

CC: Laura Shen, Blu Homes, Architect/Designer  
Cheryl Buck, Property Owners

### Attachments

- A. Application
- B. Neighborhood Compatibility Worksheet
- C. Maps
- D. Arborist Report

## FINDINGS

14-SC-40 – 444 Mundell Way

With regard to the one-story house and accessory structures, the Design Review Commission finds the following in accordance with Section 14.76.050 and Section 14.06.120 of the Municipal Code:

- a. The proposed structure complies with all provisions of this chapter;
- b. The height, elevations, and placement on the site of the propose structure, when considered with reference to the nature and location of residential structures on adjacent lots, will avoid unreasonable interference with views and privacy and will consider the topographic and geologic constraints imposed by particular building site conditions;
- c. The natural landscape will be preserved insofar as practicable by minimizing tree and soil removal; grade changes shall be minimized and will be in keeping with the general appearance of neighboring developed areas;
- d. The orientation of the proposed structure in relation to the immediate neighborhood will minimize the perception of excessive bulk and mass;
- e. General architectural considerations, including the character, size, scale, and quality of the design, the architectural relationship with the site and other buildings, building materials, and similar elements have been incorporated in order to insure the compatibility of the development with its design concept and the character of adjacent buildings;
- f. The proposed structure has been designed to follow the natural contours of the site with minimal grading, minimum impervious cover, and maximum erosion protection; and
- g. The additional height of the accessory structure is necessary in order to establish architectural compatibility with the main structure.

## CONDITIONS

14-SC-40 – 444 Mundell Way

1. The approval is based on the plans received on October 21, 2014 and the written application materials provide by the applicant, except as be modified by these conditions.
2. Obtain an encroachment permit issued from the Engineering Division prior to doing any work within the public street right-of-way.
3. The applicant/owner agrees to indemnify, defend, protect, and hold City harmless from all costs and expenses, including attorney's fees, incurred by the City or held to be the liability of City in connection with City's defense of its actions in any proceeding brought in any State or Federal Court, challenging any of the City's action with respect to the applicant's project.
4. The applicant shall correct and revise the tree inventory list on sheet A100.
5. **Prior to building permit submittal, the plans shall include:**
  - a. The conditions of approval shall be incorporated into the title page of the plans;
  - b. Fire sprinklers to be installed pursuant to Section 12.10 of the Municipal Code;
  - c. The location of underground utilities pursuant to Section 12.68 of the Municipal Code. Underground utility trenches should avoid the drip-lines of all protected trees;
  - d. Verification that all new additions and altered square footage will comply with the California Green Building Standards pursuant to Section 12.26 of the Municipal Code and provide a signature from a Qualified Green Building Professional;
  - e. The measures to comply with the New Development and Construction and Construction Best Management Practices and Urban Runoff Pollution Prevention program, as adopted by the City for the purposes of preventing storm water pollution (i.e. downspouts directed to landscaped areas, minimize directly connected impervious areas, etc); and
  - f. The location of any air conditioning units on the site plan and the manufacturer's sound rating for each unit.
6. **Prior to final inspection:**
  - a. All front yard landscaping shall be maintained and/or installed as required by the Planning Division; and
  - b. Submit verification that the addition was built in compliance with the City's Green Building Ordinance (Section 12.26 of the Municipal Code).





# ATTACHMENT A

## CITY OF LOS ALTOS GENERAL APPLICATION

Type of Review Requested: *(Check all boxes that apply)*

Permit # 1106245

<input checked="" type="checkbox"/> One-Story Design Review	<input type="checkbox"/> Sign Review	<input type="checkbox"/> Multiple-Family Review
<input type="checkbox"/> Two-Story Design Review	<input type="checkbox"/> Sidewalk Display Permit	<input type="checkbox"/> Rezoning
<input type="checkbox"/> Variance(s)	<input type="checkbox"/> Use Permit	<input type="checkbox"/> R1-S Overlay
<input type="checkbox"/> Lot Line Adjustment	<input type="checkbox"/> Tenant Improvement	<input type="checkbox"/> General Plan/Code Amendment
<input type="checkbox"/> Tentative Map/Division of Land	<input type="checkbox"/> Preliminary Project Review	<input type="checkbox"/> Appeal
<input type="checkbox"/> Subdivision Map Review	<input type="checkbox"/> Commercial Design Review	<input type="checkbox"/> Other:

Project Address/Location: 444 Mendenhall Way, Los Altos, CA 94022

Project Proposal/Use: Single Family Residence

Current Use of Property: Rental - single family

Assessor Parcel Number(s) 167-14-031 Site Area: \_\_\_\_\_

New Sq. Ft.: 3332 Remodeled Sq. Ft.: \_\_\_\_\_ Existing Sq. Ft. to Remain: 0

Total Existing Sq. Ft.: 2260 Total Proposed Sq. Ft. (including basement): \_\_\_\_\_

Applicant's Name: BLU HOMES - KEN ARENDS KEN.ARENDS@BLUHOMES.COM

Home Telephone #: 650 208 1995 Business Telephone #: \_\_\_\_\_

Mailing Address: 1245 NIMITZ AVE, MARIE ISLAND, CA

City/State/Zip Code: \_\_\_\_\_

Property Owner's Name: CHERYL BULL

Home Telephone #: 650 380 7215 Business Telephone #: \_\_\_\_\_

Mailing Address: 422 TRAVERSO CRT

City/State/Zip Code: LOS ALTOS CA

Architect/Designer's Name: Katrina Kuhl Telephone #: 707-563-9585

\*\*\* If your project includes complete or partial demolition of an existing residence or commercial building, a demolition permit must be issued and finalized prior to obtaining your building permit. Please contact the Building Division for a demolition package. \*\*\*

(continued on back)





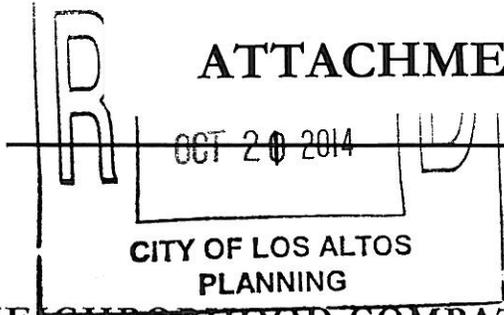
# ATTACHMENT B

City of Los Altos

Planning Division

(650) 947-2750

[Planning@losaltosca.gov](mailto:Planning@losaltosca.gov)



## NEIGHBORHOOD COMPATIBILITY WORKSHEET

In order for your design review application for single-family residential remodel/addition or new construction to be successful, it is important that you consider your property, the neighborhood's special characteristics that surround that property and the compatibility of your proposal with that neighborhood. **The purpose is to help you understand your neighborhood before you begin the design process with your architect/designer/builder or begin any formal process with the City of Los Altos.** *Please note that this worksheet must be submitted with your 1<sup>st</sup> application.*

The Residential Design Guidelines encourage neighborhood compatibility without necessarily forsaking individual taste. Various factors contribute to a design that is considered compatible with a surrounding neighborhood. The factors that City officials will be considering in your design could include, but are not limited to: design theme, scale, bulk, size, roof line, lot coverage, slope of lot, setbacks, daylight plane, one or two-story, exterior materials, landscaping et cetera.

It will be helpful to have a site plan to use in conjunction with this worksheet. Your site plan should accurately depict your property boundaries. The best source for this is the legal description in your deed.

Photographs of your property and its relationship to your neighborhood (see below) will be a necessary part of your first submittal. Taking photographs before you start your project will allow you to see and appreciate that your property could be within an area that has a strong neighborhood pattern. The photographs should be taken from across the street with a standard 35mm camera and organized by address, one row for each side of the street. Photographs should also be taken of the properties on either side and behind your property from on your property.

This worksheet/check list is meant to help *you* as well as to help the City planners and Planning Commission understand your proposal. Reasonable guesses to your answers are acceptable. The City is not looking for precise measurements on this worksheet.

**Project Address** 444 Mundell Way, Los Altos, CA 94022

**Scope of Project:** Addition or Remodel  or New Home

**Age of existing home if this project is to be an addition or remodel?** \_\_\_\_\_

**Is the existing house listed on the City's Historic Resources Inventory?** No

\* See "What constitutes your neighborhood" on page 2.

### What constitutes your neighborhood?

There is no clear answer to this question. For the purpose of this worksheet, consider first your street, the two contiguous homes on either side of, and directly behind, your property and the five to six homes directly across the street (eight to nine homes). At the minimum, these are the houses that you should photograph. If there is any question in your mind about your neighborhood boundaries, consider a radius of approximately 200 to 300 feet around your property and consider that your neighborhood.

### Streetscape

#### 1. Typical neighborhood lot size\*:

Lot area: 12309 square feet  
Lot dimensions: Length 138 feet  
Width 88 feet

If your lot is significantly different than those in your neighborhood, then note its: area 21780, length 165, and width 132.

#### 2. Setback of homes to front property line: (Pgs. 8-11 Design Guidelines)

Existing front setback if home is a remodel? No  
What % of the front facing walls of the neighborhood homes are at the front setback 65 %  
Existing front setback for house on left 25 ft./on right 25 ft.  
Do the front setbacks of adjacent houses line up? Yes

#### 3. Garage Location Pattern: (Pg. 19 Design Guidelines)

Indicate the relationship of garage locations in your neighborhood\* only on your street (count for each type)

Garage facing front projecting from front of house face 2  
Garage facing front recessed from front of house face 2  
Garage in back yard 1  
Garage facing the side 3  
Number of 1-car garages 1; 2-car garages    ; 3-car garages 0

4. **Single or Two-Story Homes:**

What % of the homes in your neighborhood\* are:

One-story 90%

Two-story 10%

5. **Roof heights and shapes:**

Is the overall height of house ridgelines generally the same in your neighborhood\*? Yes

Are there mostly hip , gable style , or other style  roofs\*?

Do the roof forms appear simple  or complex ?

Do the houses share generally the same eave height Yes?

6. **Exterior Materials:** (Pg. 22 Design Guidelines)

What siding materials are frequently used in your neighborhood\*?

wood shingle    stucco    board & batten    clapboard  
 tile    stone    brick    combination of one or more materials  
(if so, describe) \_\_\_\_\_

What roofing materials (wood shake/shingle, asphalt shingle, flat tile, rounded tile, cement tile, slate) are consistently (about 80%) used?

\_\_\_\_\_ If no consistency then explain: Rounded tile, asphalt shingle, EPDM membrane, wood shingle all used

7. **Architectural Style:** (Appendix C, Design Guidelines)

Does your neighborhood\* have a consistent identifiable architectural style?

YES    NO

Type?    Ranch    Shingle    Tudor    Mediterranean/Spanish  
 Contemporary    Colonial    Bungalow    Other

**8. Lot Slope:** (Pg. 25 Design Guidelines)

Does your property have a noticeable slope? No

What is the direction of your slope? (relative to the street)

n/a

Is your slope higher  lower  same  in relationship to the neighboring properties? Is there a noticeable difference in grade between your property/house and the one across the street or directly behind?

**9. Landscaping:**

Are there any frequently used or typical landscaping features on your street (i.e. big trees, front lawns, sidewalks, curbs, landscape to street edge, etc.)?

Big trees & front lawns

How visible are your house and other houses from the street or back neighbor's property?

Visible but 20-60% covered by trees/landscaping

Are there any major existing landscaping features on your property and how is the unimproved public right-of-way developed in front of your property (gravel, dirt, asphalt, landscape)?

No major existing landscaping features, unimproved public right of way is dirt

**10. Width of Street:**

What is the width of the roadway paving on your street in feet? 40

Is there a parking area on the street or in the shoulder area? Yes

Is the shoulder area (unimproved public right-of-way) paved, unpaved, gravel, landscaped, and/or defined with a curb/gutter? dirt/gravel

11. What characteristics make this neighborhood\* cohesive?

Such as roof material and type (hip, gable, flat), siding (board and batten, cement plaster, horizontal wood, brick), deep front yard setbacks, horizontal feel, landscape approach etc.:

Horizontal feel, natural front lawns with large trees  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

General Study

- A. Have major visible streetscape changes occurred in your neighborhood?  
 YES  NO
- B. Do you think that most (~ 80%) of the homes were originally built at the same time?  
 YES  NO
- C. Do the lots in your neighborhood appear to be the same size?  
 YES  NO
- D. Do the lot widths appear to be consistent in the neighborhood?  
 YES  NO
- E. Are the front setbacks of homes on your street consistent (~80% within 5 feet)?  
 YES  NO
- F. Do you have active CCR's in your neighborhood? (p.36 Building Guide)  
 YES  NO
- G. Do the houses appear to be of similar size as viewed from the street?  
 YES  NO
- H. Does the new exterior remodel or new construction design you are planning relate in most ways to the prevailing style(s) in your existing neighborhood?  
 YES  NO

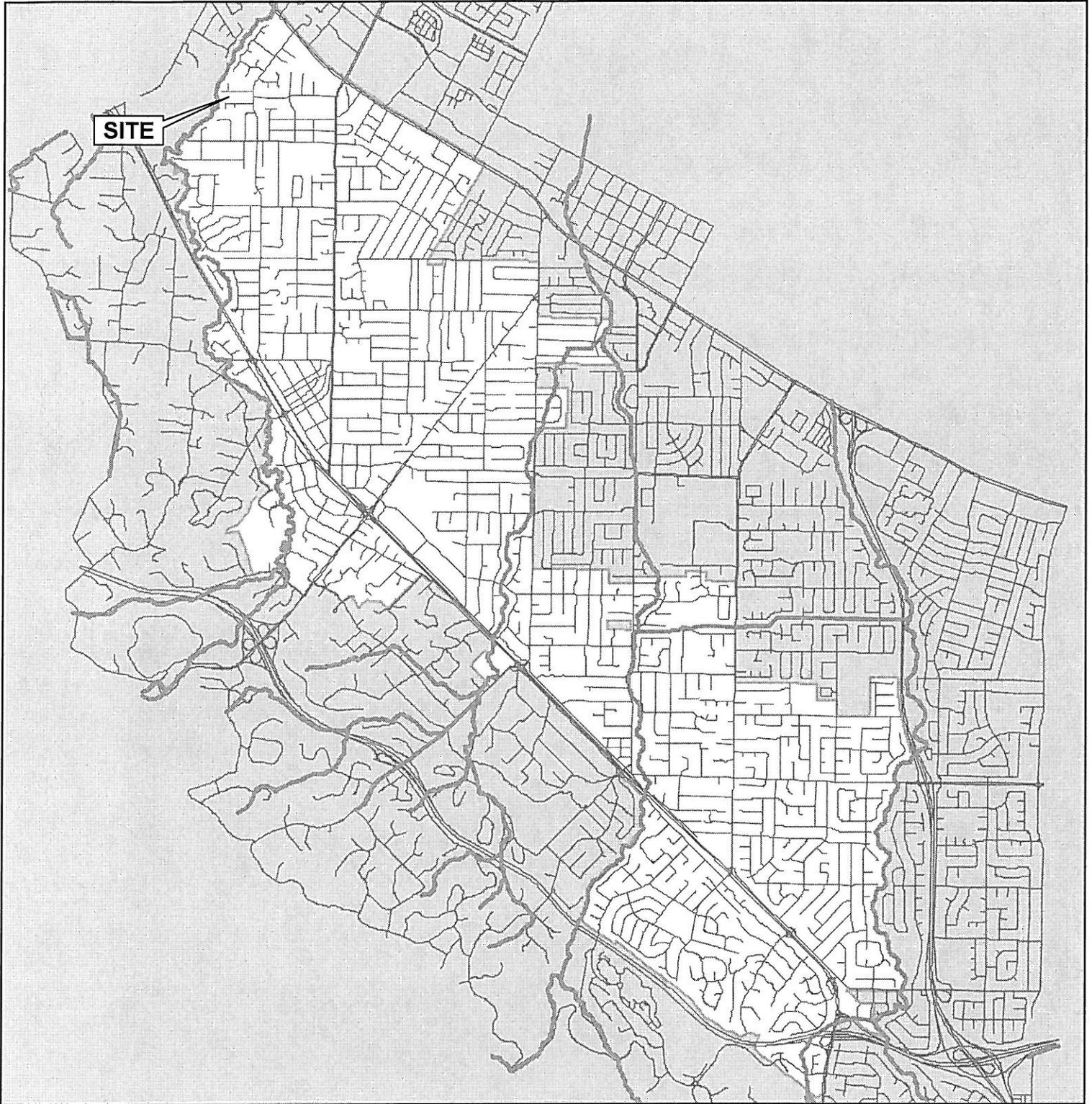
Address: 444 Mundell Way  
 Date: 7/28/2014

**Summary Table**

Please use this table to summarize the characteristics of the houses in your immediate neighborhood (two homes on either side, directly behind and the five to six homes directly across the street).

Address	Front setback	Rear setback	Garage location	One or two stories	Height	Materials	Architecture (simple or complex)
465 Mundell Way	25	25	facing side	2	25	stucco/ round tile	complex
455 Mundell Way	25	25	facing side	1	13	wd siding/asp shi	simple
441 Mundell Way	25	25	facing side	1	14	stucco/asp shingl	simple
431 Mundell Way	25	25	front	1	13	stucco/asp shingl	simple
421 Mundell Way	25	25	front	1	under cons	under cons	complex
456 Mundell Way	25	25	in back	1	14	brick/ wd shingle	simple
426 Mundell Way	25	25	front recess	1	15	brick/ wd shingle	simple
447 Traverso Ave	25	25	front recess	1	14	stucco/asp shg	simple

# AREA MAP



## CITY OF LOS ALTOS

**APPLICATION:** 14-SC-40  
**APPLICANT:** Blu Homes /C. Buck  
**SITE ADDRESS:** 444 Mundell Way

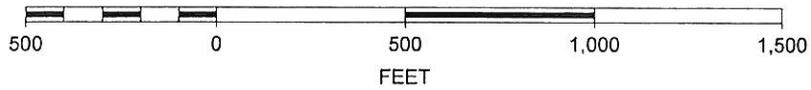


Not to Scale

# VICINITY MAP



SCALE 1 : 6,000



CITY OF LOS ALTOS

**APPLICATION:** 14-SC-40  
**APPLICANT:** Blu Homes /C. Buck  
**SITE ADDRESS:** 444 Mundell Way

**Tree Inventory, Assessment,  
and  
Protection Plan**

**444 Mundell Way  
Los Altos, CA 94024**

**Prepared for:**

**Blue Homes**

**October 10, 2014**

**Prepared By:**

**Richard Gessner**

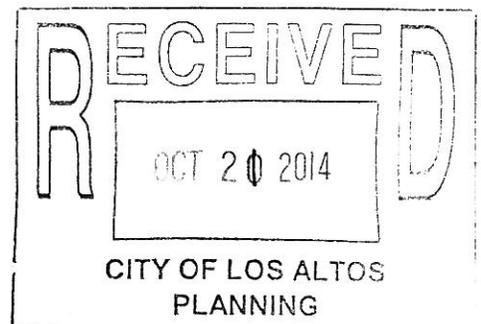
*ASCA - Registered Consulting Arborist® #496  
ISA - Board Certified Master Arborist® WE-4341B  
ISA - Tree Risk Assessor Qualified*



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## Table of Contents

Summary .....	1
Background.....	1
Assignment.....	1
Limits of the assignment.....	1
Purpose and use of the report .....	1
Observations.....	2
Discussion .....	3
Tree Inventory.....	3
Condition Rating .....	4
Suitability for Preservation .....	5
Influence Level.....	6
Tree Protection .....	7
Conclusion.....	8
Recommendations.....	8
Bibliography .....	9
Glossary of Terms.....	10
Appendix A: Tree Inventory Map.....	11
Appendix B: Tree Inventory Table.....	12
Appendix C: Photographs.....	14
C1: Neighbor's Douglas-fir and deodar cedars .....	14
C2: Chinese pistachio .....	15
C3: Black acacia, English walnut, Monterey pine .....	16
C4: Monterey pine codominant stems .....	17
C5: Deodar cedar codominant stems .....	18
C6: Coast live oak.....	19
Appendix D: Tree protection specifications.....	20
Pre-Construction Meeting with the Project Arborist .....	20
Tree Protection Zones and Fence Specifications .....	20
Monitoring .....	20
Restrictions Within the Tree Protection Zone .....	20
Root Pruning.....	21

Boring or Tunneling.....21  
Timing .....21  
Tree Pruning and Removal Operations .....21  
Tree Protection Signs .....21  
Appendix E: Tree Protection Signs .....22  
E1: English.....22  
E2: Spanish .....23  
Qualifications, Assumptions, and Limiting Conditions .....24  
Certification of Performance .....25

## Summary

The property is located at 444 Mundell Way in Los Altos and contains 37 trees comprised of 20 different species. Eleven trees including the neighbor's Douglas-fir (*Pseudotsuga menziesii*) have trunk diameters greater than fifteen inches and are considered protected by the city ordinance. Most of the trees are in fair condition and are comprised of **volunteer** species throughout the backyard. Eighteen trees have fair suitability for preservation and nineteen are poorly suited. Eighteen trees will be highly influenced by the project and will require removal. Of the eighteen, three are considered protected by the city ordinance, two Hollywood junipers (*Juniperus chinensis*) and one California bay laurel (*Umbellularia californica*), with trunk diameters greater than fifteen inches. Eight trees will be moderately affected and retained with tree protection while eleven will not be impacted at all.

## Background

Blu Homes asked me to assess the site, trees, proposed footprint plan, and to provide a report with my findings and recommendations to help satisfy the City of Los Altos planning requirements.

## Assignment

1. Provide an arborist's report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter), condition (health and structure), and suitability for preservation ratings.
2. Provide tree protection specifications and influence ratings for the trees that will be influenced by the project. Tree protection will be placed on a provided map if necessary.

## Limits of the assignment

1. No **tree risk assessments** were performed.
2. The information in this report is limited to the condition of the trees during my inspection on October 7, 2014.
3. The plans reviewed for this assignment were as follows: AD0.00, A0.00, A1.01, A1.02, 1.03 provided by Blu Homes, Inc. dated July 17, 2014.

## 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 Blu Homes, their agents, and the City of Los Altos as a reference for existing tree conditions to help satisfy the City of Los Altos planning requirements.

## Observations

The property is located at 444 Mundell Way in Los Altos and contains 37 trees comprised of 20 different species (Photo 1). There are two mature deodar cedar (*Cedrus deodara*) and one Monterey pine (*Pinus radiata*) growing along the east side of the property. On cedar and the Monterey pine have **codominant stems**. The neighboring property to the east has one large Douglas-fir (*Pseudotsuga menziesii*) growing several feet from the boundary. The west side front yard contains several small fruit trees including an old almond (*Prunus dulcis*) and some apricots (*Prunus armeniaca*). There is also one California bay laurel (*Umbellularia californica*) along with two Hollywood junipers (*Juniperus chinensis* 'Torulosa') against the house and garage. The back of the property has several volunteer trees growing along the back boundary including various pittosporum (*Pittosporum spp.*) and several Chinese pistachio (*Pistachia chinensis*). Centrally located in the back yard are one English walnut (*Juglans regia*) and one black acacia (*Acacia melanoxylon*) that also has three codominant stems. The large diameter carob (*Ceratonia siliqua*) is nearly dead and has been topped at about eight feet above grade.



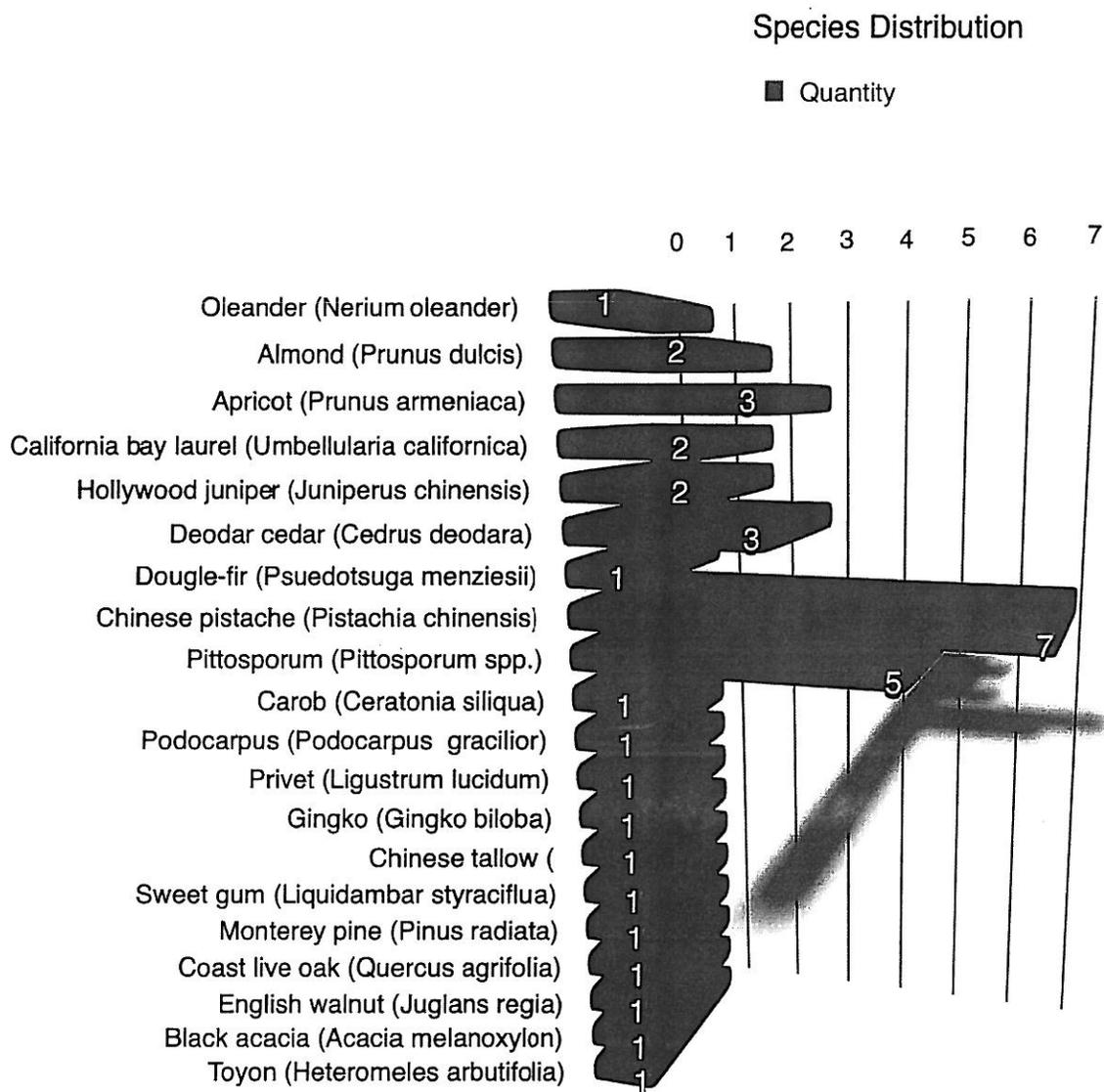
Photo 1: Current home on 444 Mundell Way

# Discussion

## Tree Inventory

The tree inventory consisted of trees within the property boundary and on the adjacent site that are greater than 4 inches in diameter at 48 inches above grade. The City of Los Altos protects any tree greater than 48 inches in circumference which is equal to 15 inches in diameter.

The chart below shows the different species and their relative quantity (Chart 1).



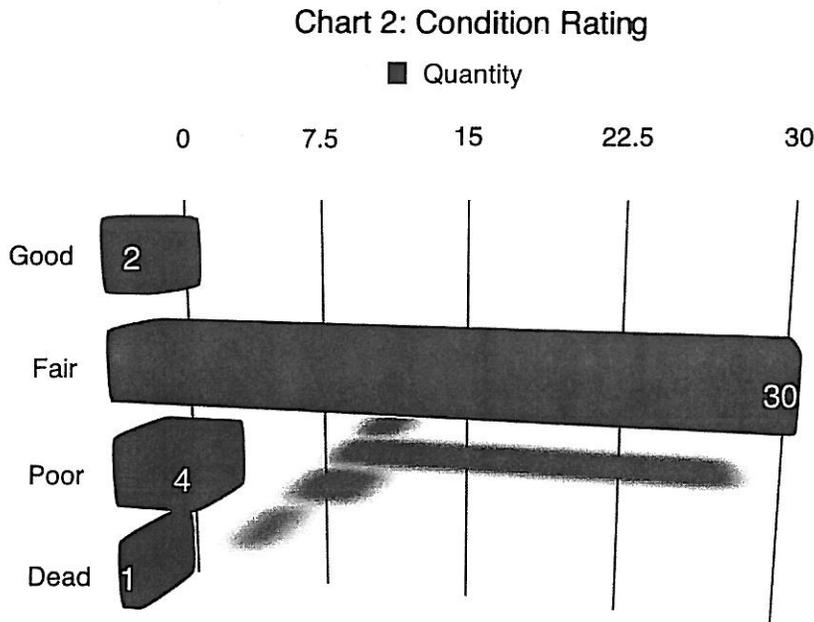
### Condition Rating

A tree’s condition is a determination of its overall health and structure based on five aspects: Roots, trunk, **scaffold branches**, twigs, and foliage. The assessment considered both the health and structure of the trees for a combined condition rating. The crown, trunk, **trunk flare**, and above ground roots were inspected from the ground.

- Exceptional = Good health and structure with significant size, location or quality.
- Good = No apparent problems, good structure and health, good longevity for the site.
- Fair = Minor problems, at least one structural defect or health concern, problems can be mitigated through cultural practices such as pruning or a plant health care program.
- Poor = Major problems with multiple structural defects or declining health, not a good candidate for retention.
- Dead/Unstable = Extreme problems, irreversible decline, failing structure, or dead.

Most of the trees are in fair condition and are comprised of volunteer species throughout the backyard. The trees are young and have not yet developed significant structural problems yet. The two almonds and carob are in poor condition and one pittospoum is dead. The neighbor’s Douglas-fir and the toyon I considered to be in good condition.

The chart below lists the quantity of trees and their condition rating for each category (Chart 2).



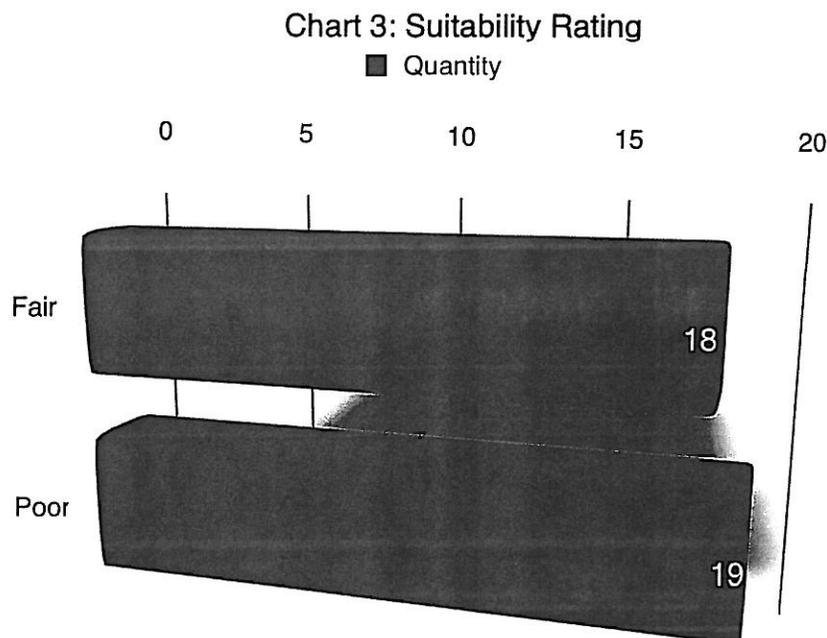
## Suitability for Preservation

A tree's suitability for preservation is determined based on its health, structure, age, species characteristics, and longevity using a scale of good, fair, or poor. The following list defines the rating scale:

- Good = Trees with good health, structural stability and longevity.
- Fair = Trees with fair health and/or structural **defects** that may be mitigated through treatment. These trees require more intense management and monitoring, and may have shorter life spans than those in the good category.
- Poor = Trees in poor health with significant structural defects that cannot be mitigated and will continue to decline regardless of treatment. The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Eighteen trees have fair suitability for preservation and nineteen are poorly suited. The discrepancy between trees poorly suited and the condition ratings is because most of the trees are volunteers or invasive species that were likely not intentionally planted. These volunteers are typically not desired in a formal landscaped setting and I considered them poorly suited for preservation.

The chart below lists the quantity of trees and their suitability rating for each category (Chart 3).



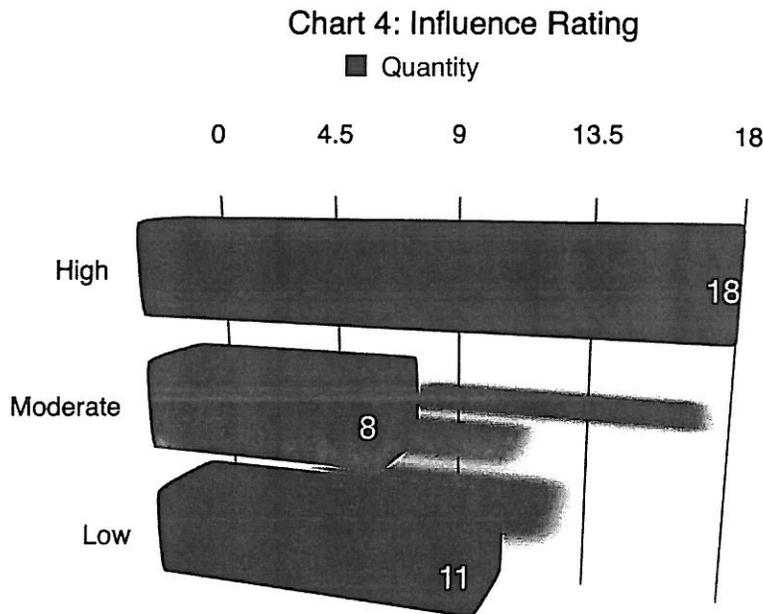
### Influence Level

Influence level defines how a tree may be influenced by construction activity and proximity to the tree, and is described as low, moderate, or high. The following scale defines the impact rating:

- Low = The construction activity will have little influence on the tree.
- Moderate = The construction may cause future health or structural problems, and steps must be taken to protect the tree to reduce future problems.
- High = Tree structure and health will be compromised and removal is recommended, or other actions must be taken for the tree to remain. The tree is located in the building envelope.

Eighteen trees will be highly influenced by the project and will require removal. Of the eighteen, three are considered protected by the city ordinance, two Hollywood junipers and one California bay laurel, with trunk diameters greater than fifteen inches. Eight trees will be moderately affected and retained with tree protection while eleven will not be impacted at all, and are primarily located against the back fence within the 25 foot setback.

The chart below lists the quantity of trees and their influence rating for each category (Chart 4).



## Tree Protection

Tree protection focuses on protecting trees from damage to the roots, trunk, or scaffold branches from heavy equipment (Appendix D).

The **tree protection zone (TPZ)** is the defined area in which certain activities are prohibited to minimize potential injury to the tree. The TPZ can be determined by a formula based on species tolerance, tree age, and diameter at breast height (DBH) (Matheny, N. and Clark, J. 1998) as the **drip line**, or a factor of six to twelve times the trunk diameter (Figure 1).

Preventing **mechanical damage** to the main stems from equipment or hand tools can be accomplished by wrapping the main stem with **straw wattle** (Figure 2). The wattle will create a porous barrier around the trunk and prevent damage to the bark and vascular tissues underneath.

The primary area of tree protection would focus on the trees around the perimeter and could be protected at their drip line distance (Appendix A). Any tree to be preserved that cannot be fenced off would require wattle to be wrapped around its trunk.

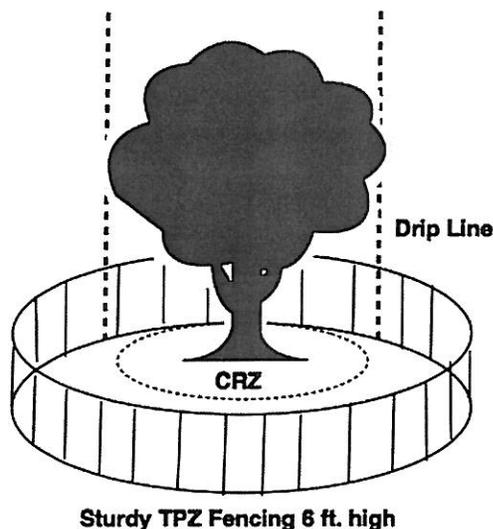


Figure 1: Tree protection distances

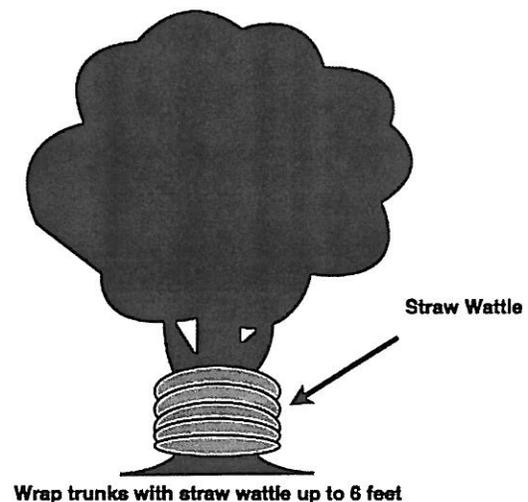


Figure 2: Trunk protection with straw wattle

## Conclusion

The property is located at 444 Mundell Way in Los Altos and contains 37 trees comprised of 20 different species. Eleven trees including the neighbor's Douglas-fir have trunk diameters greater than fifteen inches and are considered protected by the city ordinance. Most of the trees are in fair condition and are comprised of volunteer species throughout the backyard. The trees are young and have not yet developed significant structural problems yet. Eighteen trees have fair suitability for preservation and nineteen are poorly suited. The discrepancy between trees poorly suited and the condition ratings is because most of the trees are volunteers or invasive species that were likely not intentionally planted. Eighteen trees will be highly influenced by the project and will require removal. Of the eighteen, three are considered protected by the city ordinance, two Hollywood junipers and one California bay laurel, with trunk diameters greater than fifteen inches. Eight trees will be moderately affected and retained with tree protection while eleven will not be impacted at all.

## Recommendations

1. Obtain all necessary permits from the City of Monte Sereno prior to removing or significantly altering any tree.
2. Remove trees highly influenced and those within the footprint of the new structures to accommodate the construction and demolition.
3. Consider the removal of Monterey pine 457 in addition.
4. Protect the trees to be retained by placing tree protection fence at their drip line distance. Protect the neighbor's tree by placing tree protection fence at the property setback along the east side of the property.
5. Refer to Appendix A and D for tree protection guidelines and locations.

## Bibliography

Clark, James R., and Nelda P. Matheny. *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas*. Bedminster, PA: International Society Of Arboriculture, 1993.

ISA. *Glossary of Arboricultural Terms*. Champaign: International Society of Arboriculture, 2011. Print.

Matheny, Nelda P. *Trees and development: A technical guide to preservation of trees during land development*. Bedminster, PA: International Society of Arboriculture, 1998.

Smiley, E. Thomas, Fraedrich, Bruce R., and Hendrickson, Neil. *Tree Risk Management*. 2nd ed. Charlotte, NC: Bartlett Tree Research Laboratories, 2007

## Glossary of Terms

**Codominant stem:** Forked branches nearly the same size in diameter, arising from a common junction and lacking a normal branch union.

**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):** Measures at 1.4 meters (4.5 feet) above ground in the United States, Australia (arboriculture), New Zealand, and when using the Guide for Plant Appraisal, 9th edition; at 1.3 meters (4.3 feet) above ground in Australia (forestry), Canada, the European Union, and in UK forestry; and at 1.5 meters (5 feet) above ground in UK arboriculture.

**Drip Line:** Imaginary line defined by the branch spread or a single plant or group of plants.

**Mechanical damage:** Physical damage caused by outside forces such as cutting, chopping or any mechanized device that may strike the tree trunk, roots or branches.

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

**Straw wattle:** also known as straw worms, bio-logs, straw noodles, or straw tubes are man made cylinders of compressed, weed free straw (wheat or rice), 8 to 12 inches in diameter and 20 to 25 feet long. They are encased in jute, nylon, or other photo degradable materials, and have an average weight of 35 pounds.

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

**Tree Risk Assessment:** Process of evaluating what unexpected things could happen, how likely it is, and what the likely outcomes are. In tree management, the systematic process to determine the level of risk posed by a tree, tree part, or group of trees.

**Trunk:** Stem of a tree.

**Volunteer:** A tree, not planted by human hands, that begins to grow on residential or commercial property. Unlike trees that are brought in and installed on property, volunteer trees usually spring up on their own from seeds placed onto the ground by natural causes or accidental transport by people. Normally, volunteer trees are considered weeds and removed, but many desirable and attractive specimens have gone on to become permanent residents on many public and private grounds.



## Appendix B: Tree Inventory Table

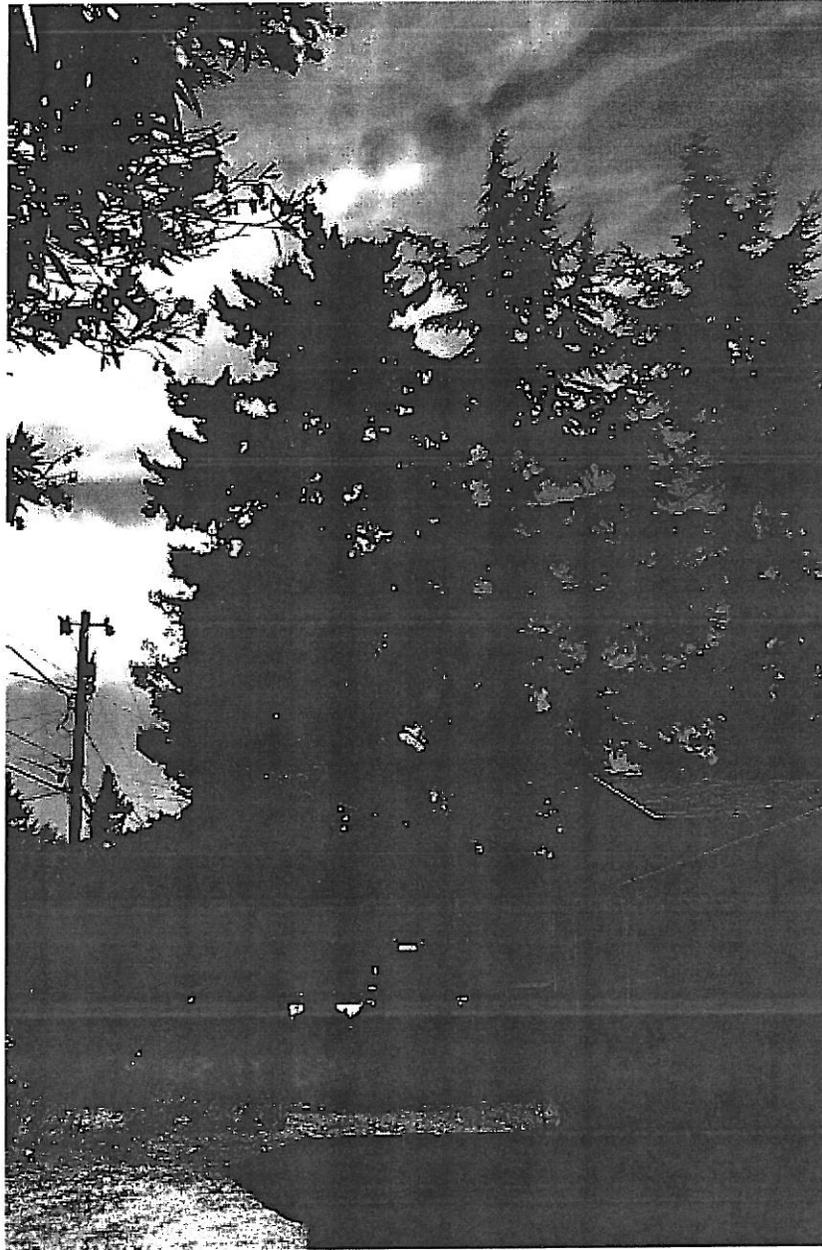
Table 1: Tree inventory

Oleander	431	20	20	10	Fair	Fair	High
<b>Almond</b>	<b>432</b>	<b>16</b>	<b>15</b>	<b>6</b>	<b>Poor</b>	<b>Poor</b>	<b>High</b>
Almond	433	8	10	5	Poor	Poor	High
<b>Apricot</b>	<b>434</b>	<b>4</b>	<b>8</b>	<b>5</b>	<b>Fair</b>	<b>Fair</b>	<b>High</b>
Apricot	435	4	8	5	Fair	Poor	High
<b>Toyon</b>	<b>436</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>Good</b>	<b>Fair</b>	<b>High</b>
Bay laurel	437	13 And 7	45	10	Poor	Poor	High
<b>Hollywood juniper</b>	<b>438</b>	<b>13</b>	<b>25</b>	<b>15</b>	<b>Fair</b>	<b>Poor</b>	<b>High</b>
Hollywood juniper	439	13	25	15	Fair	Fair	High
<b>Deodar cedar</b>	<b>440</b>	<b>23</b>	<b>65</b>	<b>15</b>	<b>Fair</b>	<b>Fair</b>	<b>Moderate</b>
Douglas-fir	441	26	75	15	Good	Fair	Low
<b>Apricot</b>	<b>442</b>	<b>10</b>	<b>8</b>	<b>6</b>	<b>Fair</b>	<b>Poor</b>	<b>High</b>
Chinese pistache	443	9	20	6	Fair	Fair	High
<b>Chinese pistache</b>	<b>444</b>	<b>6</b>	<b>15</b>	<b>6</b>	<b>Fair</b>	<b>Fair</b>	<b>High</b>
Pittosporum Tibiria	445	6	15	6	Fair	Fair	High
<b>Pittosporum undulatum</b>	<b>446</b>	<b>5</b>	<b>15</b>	<b>5</b>	<b>Fair</b>	<b>Poor</b>	<b>High</b>
Carob	447	18	10	0	Poor	Poor	Low
<b>Podocarpus</b>	<b>448</b>	<b>6</b>	<b>20</b>	<b>5</b>	<b>Fair</b>	<b>Fair</b>	<b>Low</b>
Privet	449	8	25	6	Fair	Poor	Low
<b>Bay laurel</b>	<b>450</b>	<b>6</b>	<b>25</b>	<b>8</b>	<b>Fair</b>	<b>Poor</b>	<b>Low</b>
Ginkgo	451	8	25	8	Fair	Poor	Low
<b>Chinese tallow</b>	<b>452</b>	<b>7</b>	<b>25</b>	<b>6</b>	<b>Fair</b>	<b>Poor</b>	<b>Low</b>

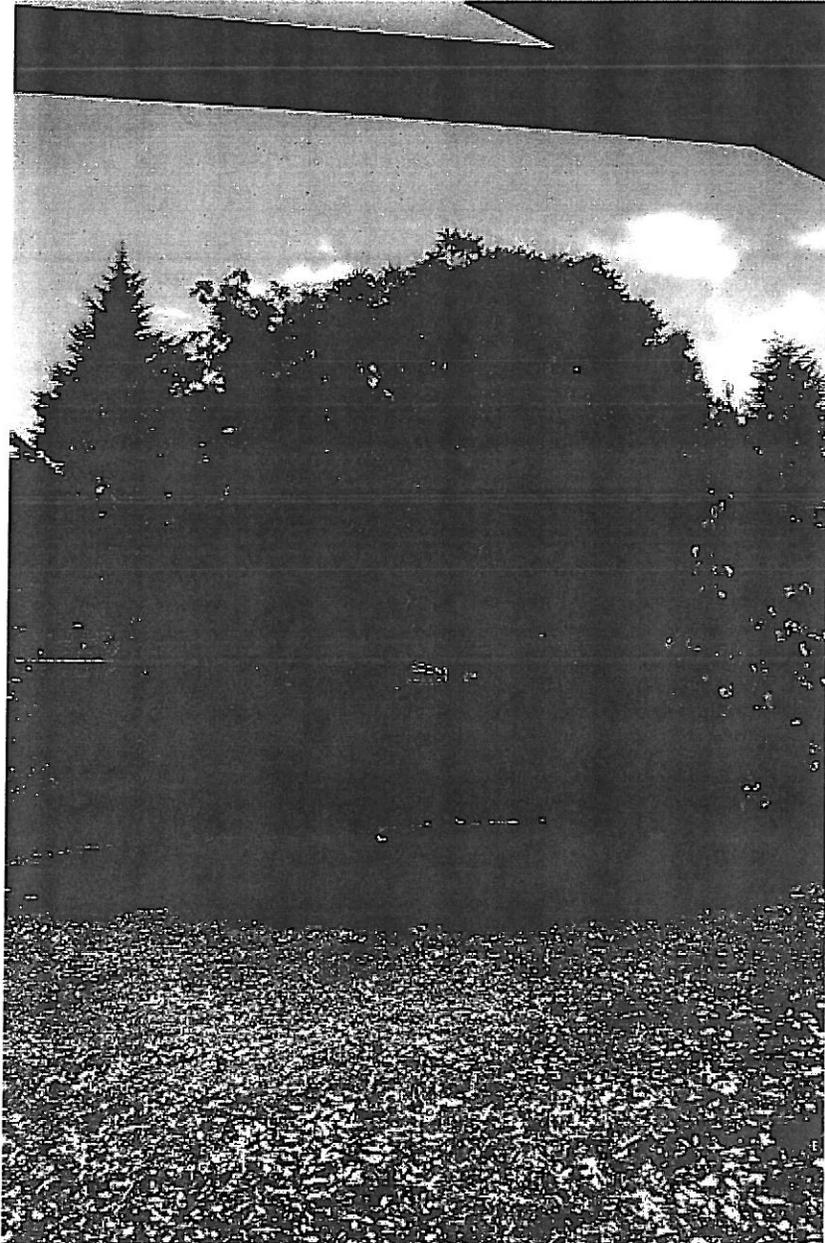
Sweet gum	453	4	25	6	Fair	Poor	Low
<b>Pittosporum undulatum</b>	<b>454</b>	<b>8</b>	<b>25</b>	<b>10</b>	<b>Fair</b>	<b>Fair</b>	<b>Low</b>
Pittosporum undulatum	455	7	25	10	Fair	Fair	Low
<b>Pittosporum undulatum</b>	<b>456</b>	<b>6</b>	<b>20</b>	<b>10</b>	<b>Dead</b>	<b>Poor</b>	<b>Low</b>
Monterey pine	457	36	70	20	Fair	Poor	Moderate
<b>Chinese pistache</b>	<b>458</b>	<b>6</b>	<b>25</b>	<b>8</b>	<b>Fair</b>	<b>Fair</b>	<b>Moderate</b>
Chinese pistache	459	11	25	10	Fair	Fair	Moderate
<b>Deodar cedar</b>	<b>460</b>	<b>18 and 18</b>	<b>75</b>	<b>20</b>	<b>Fair</b>	<b>Poor</b>	<b>Moderate</b>
Deodar cedar	461	26	65	20	Fair	Fair	Moderate
<b>Coast live oak</b>	<b>462</b>	<b>7</b>	<b>25</b>	<b>6</b>	<b>Fair</b>	<b>Fair</b>	<b>High</b>
Chinese pistache	463	6	20	8	Fair	Fair	High
<b>Chinese pistache</b>	<b>464</b>	<b>4</b>	<b>15</b>	<b>8</b>	<b>Fair</b>	<b>Poor</b>	<b>High</b>
Chinese pistache	465	5	20	8	Fair	Fair	High
<b>English walnut</b>	<b>466</b>	<b>8, 8, 8</b>	<b>25</b>	<b>15</b>	<b>Fair</b>	<b>Poor</b>	<b>Moderate</b>
Black acacia	467	8, 8, 9	25	10	Fair	Poor	Moderate

## Appendix C: Photographs

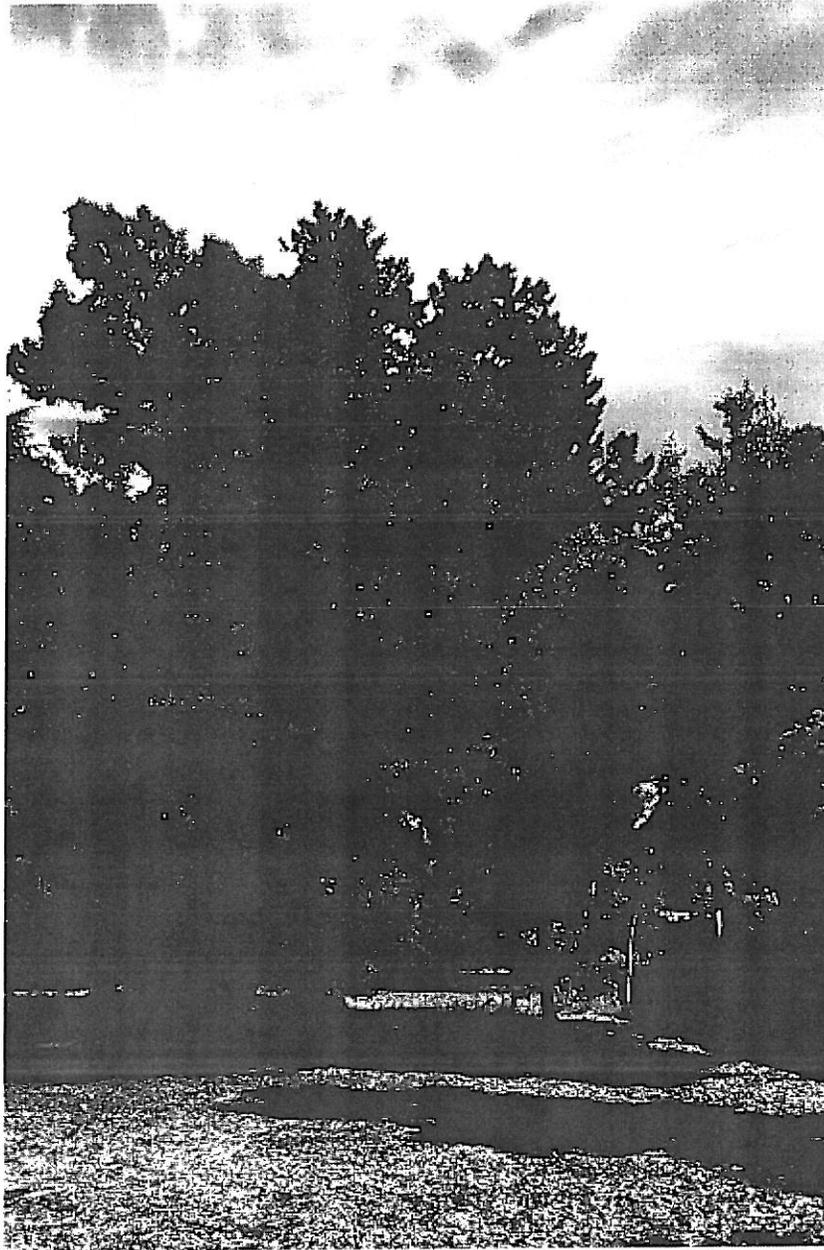
### C1: Neighbor's Douglas-fir and deodar cedars



**C2: Chinese pistachio**



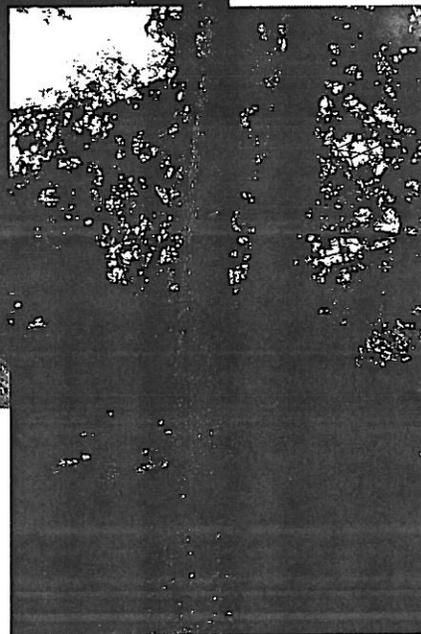
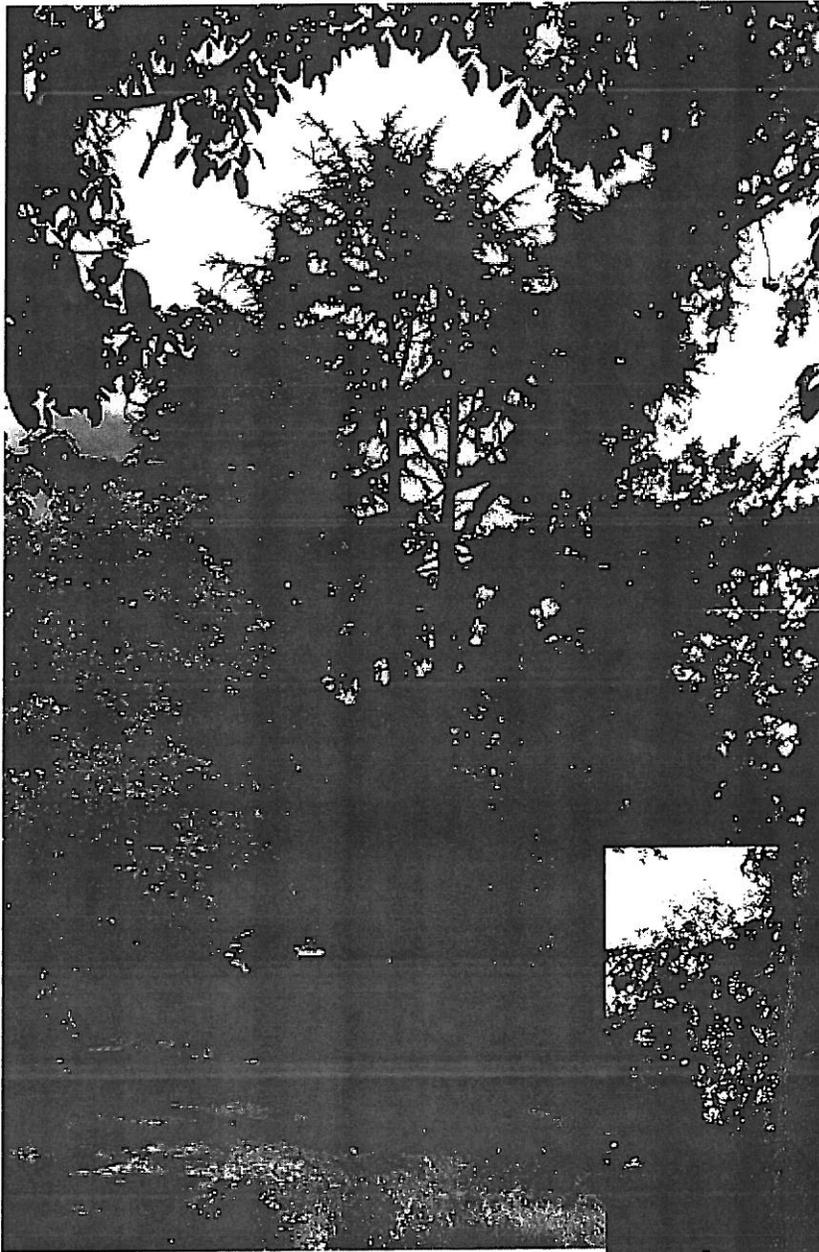
**C3: Black acacia, English walnut, Monterey pine**



**C4: Monterey pine codominant stems**



**C5: Deodar cedar codominant stems**



**C6: Coast live oak**



## Appendix D: Tree protection specifications

Tree protection locations should be marked before any fencing contractor arrives.

### Pre-Construction Meeting with the Project Arborist

Prior to beginning work, all contractors involved with the project should attend a pre construction meeting with the project arborist to review the tree protection guidelines. Access routes, storage areas, and work procedures will be discussed.

### Tree Protection Zones and Fence Specifications

Tree protection fence should be established prior to the arrival of construction equipment or materials on site. Fence should be comprised of six-foot high chain link fence mounted on eight-foot tall, 1 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced no more than 10 feet apart. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

The fence should be maintained throughout the site during the construction period and should be inspected periodically for damage and proper functions.

Fence should be repaired, as necessary, to provide a physical barrier from construction activities.

A final inspection by the city arborist at the end of the project will be required prior to removing any tree protection fence and replacement tree shall be planted at this time.

### 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.

### Restrictions Within the Tree Protection Zone

No storage of construction materials, debris, or excess soil will be allowed within the Tree Protection Zone. Spoils from the trenching shall not be placed within the tree protection zone either temporarily or permanently. Construction personnel and equipment shall be routed outside the tree protection zones.

## **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.

## **Boring or Tunneling**

Boring machines should be set up outside the drip line or established Tree Protection Zone. Boring may also be performed by digging a trench on both sides of the tree until roots one inch in diameter are encountered and then hand dug or excavated with an Air Spade® or similar air or water excavation tool. Bore holes should be adjacent to the trunk and never go directly under the main stem to avoid oblique (heart) roots. Bore holes should be a minimum of three feet deep.

## **Timing**

If the construction is to occur during the summer months supplemental watering and bark beetle treatments should be applied to help ensure survival during and after construction.

## **Tree Pruning and Removal Operations**

All tree pruning or removals should be performed by a qualified arborist with a C-61/D-49 California Contractors License. Tree pruning should be specified according to ANSI A-300A pruning standards and adhere to ANSI Z133.1 safety standards. Trees that need to be removed or pruned should be identified in the pre-construction walk through.

## **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. Text on the signs should be in both English and Spanish (Appendix E).

# Appendix E: Tree Protection Signs

## E1: English

**WARNING**

**Tree Protection Zone**

**This Fence Shall not be moved without  
approval. Only authorized personnel  
may enter this area!**

Project Arborist

E2: Spanish

**CUIDADO**  
**Zona De Arbol Pretejido**  
**Esta cerca no sera removida sin**  
**aprobacion. Solo personal autorizado**  
**entrara en esta area!**

Project Arborist

## Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or attend meetings, hearings, conferences, mediations, arbitration, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only examined items and their condition at the time of inspection; and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

## Certification of Performance

I Richard Gessner, Certify:

That I have personally inspected the tree(s) and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation and/or appraisal is stated in the attached report and Terms of Assignment;

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

That the analysis, opinions and conclusions stated herein are my own;

That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted Arboricultural practices;

That no one provided significant professional assistance to the consultant, except as indicated within the report.

That 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 assessment, the attainment of stipulated results, or the occurrence of any other subsequent events;

I further certify that I am a Registered Consulting Arborist® with the American Society of Consulting Arborists, and that I acknowledge, accept and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Board Certified Master Arborist® and Tree Risk Assessor Qualified. I have been involved with the practice of Arboriculture and the care and study of trees since 1998.

Richard J. Gessner



ASCA Registered Consulting Arborist® #496  
ISA Board Certified Master Arborist® WE-4341B  
ISA Tree Risk Assessor Qualified

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