

**Arborist Report**

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**434 Rose Ave.  
Pleasanton, CA**

**PREPARED FOR  
Peter Michno  
4049 1st. Street  
Livermore, CA**

**PREPARED BY:  
HortScience, Inc.  
325 Ray St.  
Pleasanton, CA 94566**

**January 30, 2014**



**Arborist Report  
434 Rose Ave.  
Pleasanton, CA**

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***Tree Assessment Map  
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# **Arborist Report**

## **434 Rose Ave.**

### **Pleasanton, CA**

#### ***Introduction and Overview***

Peter Michno is planning to construct a two-unit apartment building at 434 Rose Avenue. Currently one house exists on the site and will remain, with the other two units to be built behind the house in the vacant yard. HortScience, Inc. was asked to prepare an **Arborist Report** for the site as part of the application to the City of Pleasanton.

This report provides the following information:

1. An evaluation of the health and structural condition of the trees within the proposed project area based on a visual inspection from the ground.
2. An assessment of the trees that would be preserved and removed based on Peter Michno's planned use of the property.
3. An appraisal value of the trees according to the procedures described in the *Guide for Plant Appraisal* (Council of Tree and Landscape Appraisers).
4. Guidelines for tree preservation during the design, construction and maintenance phases of development.

#### ***Tree Assessment Methods***

Trees were assessed on December 18, 2013. The survey included trees 6" in diameter and greater, located within and adjacent to the proposed project area. Trees located off-site that were either near the proposed project or had canopies extending over the property line were included. The assessment procedure consisted of the following steps:

1. Identifying the tree as to species;
2. Tagging each tree with an identifying number and recording its location on a map;
3. Measuring the trunk diameter at a point 4.5' above grade;
4. Evaluating the health and structural condition using a scale of 1 – 5:
  - 5 - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
  - 4 - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
  - 3 - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
  - 2 - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
  - 1 - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

- High:** Trees with good health and structural stability that have the potential for longevity at the site.
- Moderate:** Trees with somewhat declining health and/or structural defects that can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.
- Low:** Tree in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

**City of Pleasanton Urban Tree Protection Requirements**

The Pleasanton Municipal Code Chapter 17.16 controls the removal and preservation of Heritage trees within the city. Heritage trees are defined as:

1. Any single-trunked tree with a circumference of 55 inches or more measured four and one-half feet above ground level;
2. Any multi-trunked tree of which the two largest trunks have a circumference of 55 inches (18 inches diameter) or more measured four and one-half feet above ground level;
3. Any tree 35 feet or more in height;
4. Any tree of particular historical significance specifically designated by official action;
5. A stand of trees, the nature of which makes each dependent upon the other for survival or the area's natural beauty.

Heritage trees may not be removed, destroyed or disfigured without a permit.

**Description of Trees**

Eighteen (18) trees representing five species were evaluated (Table 1). One street tree (#70) and three off-site trees (#71, 78 & 88) were evaluated because their canopies extend onto the subject property. Half of the trees (9 trees) assessed were in fair condition, 8 were in poor condition and one was in good condition. Descriptions of each tree are found in the **Tree Assessment Form** and approximate locations are plotted on the **Tree Assessment Map** (see Exhibits).

**Table 1. Condition ratings and frequency of occurrence of trees  
 434 Rose Ave., Pleasanton, CA**

Scientific Name	Common Name	Condition			Total
		Poor (1-2)	Fair (3)	Good (4-5)	
<i>Ailanthus altissima</i>	Tree of heaven	2	2	0	4
<i>Citrus limon</i>	Lemon	0	1	0	1
<i>Quercus agrifolia</i>	Coast live oak	4	2	1	7
<i>Quercus ilex</i>	Holly oak	2	1	0	3
<i>Quercus lobata</i>	Valley oak	1	2	0	3
<b>Total</b>		<b>8</b>	<b>9</b>	<b>1</b>	<b>18</b>

The most common species assessed was coast live oak (7 trees). The largest was 36" diameter #70, a street tree growing in front of the existing house (Photo 1). Six coast live oaks were along the eastern property line, between the subject site and a vacant lot to the east (Photo 2). Those six trees were in poor (4 trees) to fair (2 trees) condition; they were young to semi-mature with a trunk diameter ranging from 9 to 15 inches. Many of the trees on the eastern border had been poorly pruned, creating asymmetrical and narrow canopies and trees with poor form (photo 3).



**Photo 1:** Coast live oak #70 was the largest tree assessed with a canopy spreading across the street.

Tree of heaven was the second most common species evaluated; four trees bordered the eastern edge of the property. They were in

fair (2 trees) to poor (2 trees) condition. The trees of heaven ranged in maturity with diameters from 6 to 26 inches. The largest tree of heaven (#71) was the closest tree to the street on the eastern border (Photo 4). This tree was off-site and part of the trunk bulging over the sidewalk.



**#77 #78 #79 #80 #81**

**Photo 2:** Trees lined the eastern property boundary.

Three holly oaks were growing along the eastern border. Two were in poor condition and one was in fair. All three trees were young averaging 8 inches in diameter. Two suffered from poor form due to heavy pruning and one was almost dead.

Three valley oaks also made up the eastern border. Two were in fair condition and one was poor. They averaged 9 inches in diameter and ranged from 6 to 13 inches. One (#78) valley oak was off-site and leaned heavily to the east; the two other valley oaks had poor structure due previous pruning and crowding by neighboring trees.

Four trees evaluated qualified as *Heritage* (#70, 71, 77 & 80). *Heritage* status of individual trees is identified in the ***Tree Assessment Form and Tree Assessment Plan*** (see Exhibits).



**Photo 3 (left):** Oaks #72-76 were pruned to remove branches on the west, creating asymmetric canopies.



**Photo 4 (right):** Tree of Heaven #71 was not on the property, but its canopy extended over the drive way. One trunk was dead; the base of the larger trunk was growing over the sidewalk.

### ***Suitability for Preservation***

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Evaluation of suitability for preservation considers several factors:

- **Tree health**  
Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees. For example, tree of heaven #83 likely will not tolerate construction impacts as well as the healthier trees of heaven.
- **Structural integrity**  
Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. Tree # 79 was an example of such a tree.
- **Species response**  
There is a wide variation in the response of individual species to construction impacts and changes in the environment. Valley oak is moderately tolerant of construction while coast live oak tolerates construction well.

- **Tree age and longevity**  
Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.
- **Species invasiveness**  
Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (<http://www.cal-ipc.org/paf/>) lists species identified as being invasive. Pleasanton is part of the Central West Floristic Province. Tree of heaven has a *moderate* invasiveness rating.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (see **Tree Assessment Forms** in Exhibits, and Table 2, following page).

We consider trees with good suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with poor suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

**Table 2: Tree suitability for preservation  
434 Rose Ave., Pleasanton, CA.**

<b>High</b>	These are trees with good health and structural stability that have the potential for longevity at the site. Coast live oaks # 70 and 80 were the only two trees highly suitable for preservation.
<b>Moderate</b>	Trees in this category have fair health and/or structural defects that may be abated with treatment. These trees require more intense management and monitoring, and may have shorter life-spans than those in the "high" category. Valley oak #78 and coast live oak #81 were both moderately suitable for preservation.
<b>Low</b>	Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Fourteen (14) trees had low suitability for preservation: four coast live oaks, four trees of heaven, three holly oaks, two valley oaks and one lemon.

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### ***Evaluation of Impacts and Recommendations for Preservation***

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The **Tree Assessment** was the reference point for tree condition and quality. I referred to the Preliminary Grading Plan created by Alexander & Associates Inc. dated November 4<sup>th</sup> 2013 to estimate impacts to trees from the proposed construction.

The proposed site plan indicated that all trees except #82, 83 and 84 would be preserved. I recommend removing 13 trees, however, because of their poor condition: #71-77, 79, 82-86. Two of the trees identified for removal were *Heritage* (#71 & 77).

Tree of heaven #71 is off the property. I recommend removing it because of its poor condition, conflicts with the sidewalk, and its invasive nature. Following removal, the stump should be treated with an herbicide to prevent sprouting. I suggest contacting the owner of the tree to request his/her support in applying for a permit to remove the tree.

I recommend preserving five trees: #10, 78 (off-site), 80, 81 and 88 (off-site). These include two *Heritage* coast live oaks (#70 and 80). Preservation of the trees is predicated on the construction impacts being within the tolerances of the trees and on the implementation of specific recommendations in the *Tree Preservation Guidelines*.

Plans include preserving trees #78, 80 & 81 in a small opening along the edge of the driveway. The driveway will be constructed of permeable pavers. I recommend raising the finish grade of the driveway as much as possible and underlaying the base material with a geotextile to reduce the depth of excavation within the trees' root zones. Utilities will be placed underground as close to the units as possible to minimize root loss. Excavation for the pavement and utilities will need to be monitored by the Consulting Arborist and appropriate mitigation will be recommended based on the size and proximity of roots pruning required. Root loss will be unavoidable and may exceed tolerance of trees. See *Tree Preservation Guidelines* for further recommendations.

Street tree #70 will not be affected by the planned construction. Due to the heavy scaffold branches at awkward angles, I recommend an aerial inspection and pruning to reduce end weight. Pruning specifications are provided in the *Tree Preservation Guidelines*.

**Table 3: Assessment of Trees to be Preserved and Removed  
 343 Rose Ave., Pleasanton**

Tree No.	Species	Trunk Diameter (in)	Heritage Tree?	Suitability for Preservation	Disposition
70	Coast live oak	36	Yes	High	Preserve
71	Tree of heaven	26	Yes	Low	Remove, low suitability
72	Coast live oak	13	No	Low	Remove, low suitability
73	Valley oak	9	No	Low	Remove, low suitability
75	Holly oak	8	No	Low	Remove, low suitability
76	Holly oak	8	No	Low	Remove, low suitability
77	Tree of heaven	13,6	Yes	Low	Remove, low suitability
78	Valley oak	6	No	Moderate	Preserve
79	Coast live oak	9	No	Low	Remove, low suitability
80	Coast live oak	15,14,14	Yes	High	Preserve
81	Coast live oak	14	No	Moderate	Preserve
82	Coast live oak	12	No	Low	Remove, low suitability
83	Tree of heaven	6,5	No	Low	Remove, low suitability
84	Holly oak	7	No	Low	Remove, low suitability
85	Valley oak	13	No	Low	Remove, low suitability
86	Coast live oak	10	No	Low	Remove, low suitability
87	Tree of heaven	10,6	No	Low	Remove, low suitability
88	Lemon	6,6,6,6,6	No	Low	Preserve, off-site

### ***Tree Appraisal***

The City of Pleasanton requires an appraisal of the value of the trees on the property. In appraising the value of the trees, we employed the standard methods found in ***Guide for Plant Appraisal***, 9th edition (International Society of Arboriculture, Champaign IL, 2000). In addition, we referred to ***Species Classification and Group Assignment*** (2004), a publication of the Western Chapter of the International Society of Arboriculture. These two documents outline the methods employed in tree appraisal.

The value of landscape trees is based on four factors: size, species, condition and location. Size is measured as trunk diameter, normally 54" above grade. The species factor considers the adaptability and appropriateness of the plant in the East Bay area. The ***Species Classification and Group Assignment*** lists recommended species ratings. Condition reflects the health and structural integrity of the individual. The location factor considers the site, placement and contribution of the tree in its surrounding landscape. We appraised tree of heaven (#71) at \$0, due to the risk of failure.

The appraised value of each tree is provided in the Exhibits. The value of the 14 trees to be removed is \$7,750. The value of the 5 trees to be preserved is \$32,300.

### ***Tree Preservation Guidelines***

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees depends on the amount of excavation and grading, care with which demolition is undertaken, and construction methods. Coordinating any construction activity inside the **TREE PROTECTION ZONE** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

#### **Design recommendations**

1. **TREE PROTECTION ZONE** shall be established a minimum of 15 feet from the trunks of trees 78, 80 & 81. Pavement design and utilities alignments shall be adjusted as needed to avoid root injury within this area. Spoil from trench, footing, utility or other excavation shall not be placed within the **TREE PROTECTION ZONE**, neither temporarily nor permanently.
2. Increase the size of the openings on the west side of trees #78, 80, and 81 to maintain the edge of pavement a minimum of five feet from the edge of trunks.
3. Raising the finish grade of the driveway as much as possible and underlaying the base material with a geotextile to reduce the depth of excavation within the trees' root zones.
4. Locate underground utilities and services as close to the new units as possible to avoid trenching within the root systems of trees to be preserved.
5. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
6. Irrigation systems must be designed so that no trenching that severs roots larger than 1" diameter will occur within the **TREE PROTECTION ZONE**.

**Pre-construction treatments and recommendations**

1. The construction superintendent shall meet with the Project Arborist before beginning work to discuss work procedures and tree protection.
2. Protect the trunks of trees #78, 80 & 81 from inadvertent damage by erecting barriers (wood fence, hay bales, or similar) around the trunks to a height of 4-5 feet. Tree protection devices are to remain until all grading and construction is completed.
3. Because the plans involve grading within five feet of the trees, the project arborist should be on-site during to observe excavation and root pruning around the trees.
4. Prune trees to be preserved to raise canopies as needed for construction activities.
  - a. Street tree #70 should have an aerial inspection by a Certified Arborist to determine stability of branch connections. Prune tree to reduce end weight on heavy scaffold branches.
  - b. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300).
5. Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) to remain.

**Recommendations for tree protection during construction**

1. Any approved grading, construction, demolition or other work within the **TREE PROTECTION ZONE** should be monitored by the Consulting Arborist.
2. All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved.
3. Tree protection devices are to remain until all site work has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Project Arborist.
4. Construction trailers, traffic and storage areas must remain outside **TREE PROTECTION ZONE** at all times.
5. Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Project Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2" in diameter should be avoided.
6. If roots 2" and greater in diameter are encountered and during site work must be cut to complete the construction, the Project Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.
7. All grading within the dripline of trees shall be done using the smallest equipment possible. The equipment shall operate perpendicular to the tree and operate from outside the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Project Arborist.

8. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Project Arborist so that appropriate treatments can be applied.
9. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.
10. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

**Maintenance of impacted trees**

Trees preserved at 343 Rose Ave. will experience a different physical environment than pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulching, pest management, and irrigation may be required. In addition, monitoring tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, it is recommended that the property owner have the trees inspected annually for structural condition and health and take appropriate action to preserve the trees.

**HortScience, Inc.**



Ryan Gilpin, M.S.  
Certified Arborist #WE-10268A

## Tree Assessment

343 Rose Ave.  
Pleasanton, CA

Prepared for:  
Peter Michno

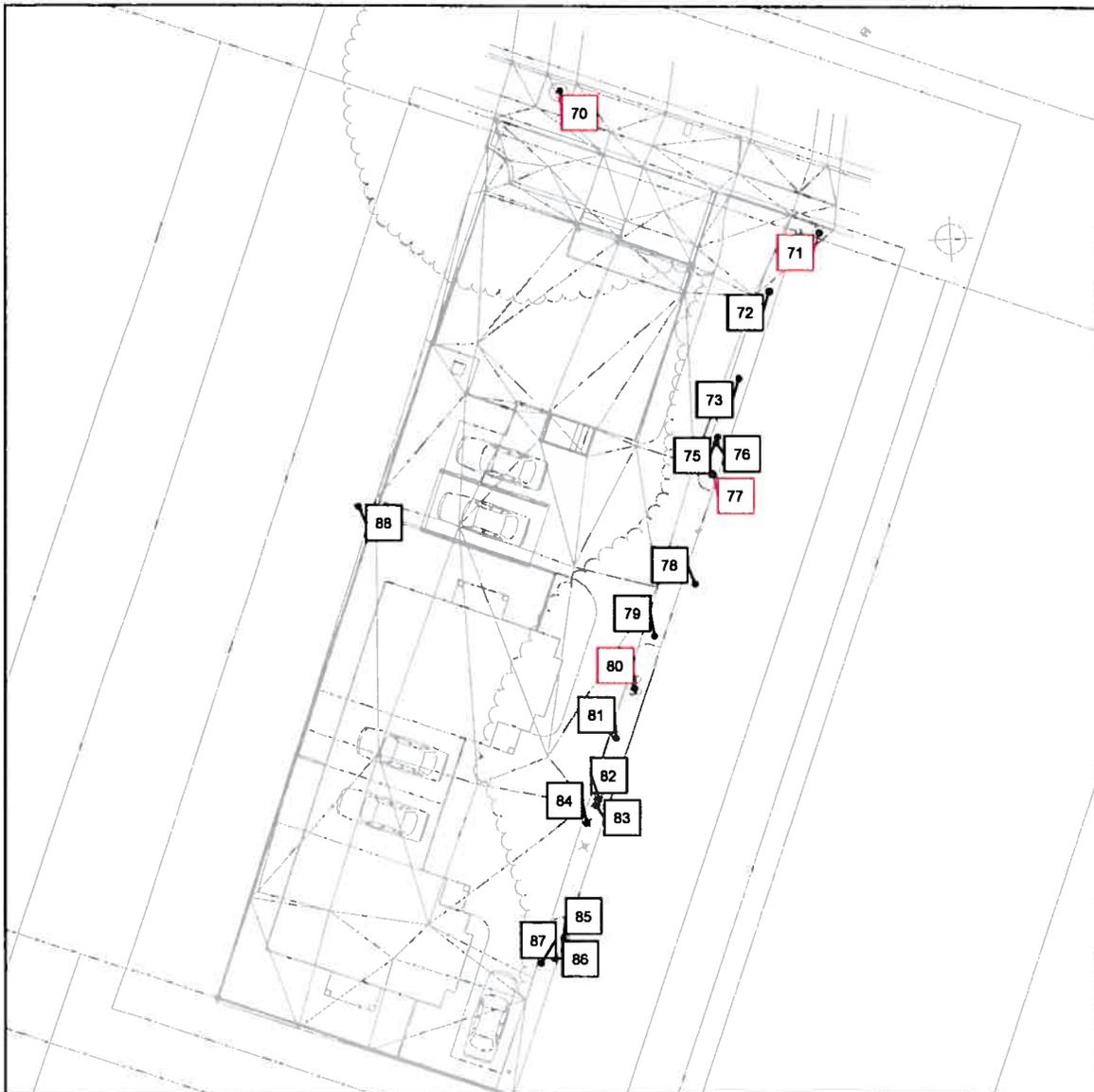
December 2013

### Notes:

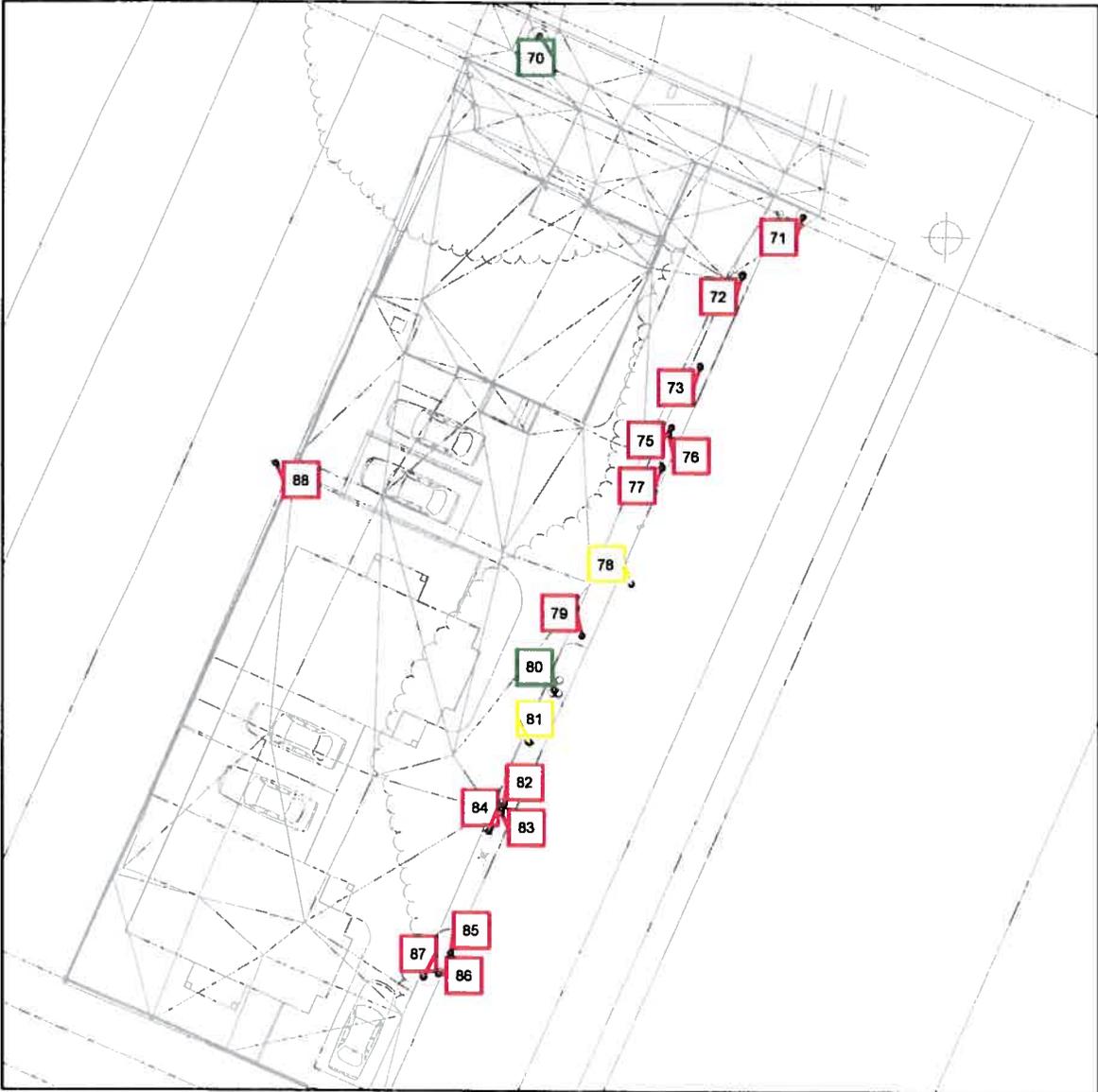
1. Tree locations are approximate.
2. Base file is "Site Plan.dwg"  
Modified Nov 6, 2013. Provided  
by Hereld & Ayers Architects.
3. Red indicates Heritage.

### Heritage

- No
- Yes
- Trees
- - - SitePlan.dwg



325 Ray Street  
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## Tree Suitability for Preservation

**343 Rose Ave.  
Pleasanton, CA**

Prepared for:  
Peter Michno

December 2013

- Notes:
1. Tree locations are approximate.
  2. Base file is "Site Plan.dwg" Modified Nov 6, 2013. Provided by Herold & Ayers Architects.
  3. Colors indicate tree suitability for preservation.

### Suitability for Preservation

- High
- Low
- Moderate
- Trees
- SITE PLAN.DWG



325 Ray Street  
Pleasanton, CA 94566  
Phone (925) 484-0211  
Fax (925) 484-0596

# Tree Assessment

434 Rose Ave.  
Pleasanton, CA  
December 2013



Tree No.	Species	Trunk Diameter (in.)	Heritage Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
70	Coast live oak	36	Yes	4	High	Street tree; huge spreading crown; several trunk wounds from passing trucks; 4 foot by 4 foot planter; hole through trunk from two merged branches; large, heavy scaffold branches at awkward angles.
71	Tree of heaven	26	Yes	2	Low	Off-site; multiple attachments at 5 ft.; asymmetrical towards road; dead stem; growing over sidewalk.
72	Coast live oak	13	No	2	Low	Pruned to one side; canopy to south; many pruning and trunk wounds.
73	Valley oak	9	No	3	Low	Bowed trunk; heavy asymmetrical pruning; low canopy ratio.
75	Holly oak	8	No	3	Low	Pruned asymmetrical; crooked trunk; growing vigorously.
76	Holly oak	8	No	1	Low	All but dead.
77	Tree of heaven	13,6	Yes	3	Low	Codominant from base; pruned asymmetrical; low canopy ratio.
78	Valley oak	6	No	3	Moderate	Off-site; crowded by neighbors; leaning heavily east; trunk outside canopy.
79	Coast live oak	9	No	2	Low	Extremely poor structure; vigorous canopy; crooked trunk.
80	Coast live oak	15,14,14	Yes	3	High	Multiple attachments from 2 ft.; spreading dominant canopy; minor dieback.
81	Coast live oak	14	No	3	Moderate	Crowded by neighbor; leaning south; codominant at 15 ft.
82	Coast live oak	12	No	2	Low	Topped at 10 feet.
83	Tree of heaven	6,5	No	2	Low	Codominant at base; dieback; leaning south.
84	Holly oak	7	No	2	Low	Recovering from topped at 10 ft.; vigorous growth.
85	Valley oak	13	No	2	Low	Pruned hard; previously topped; asymmetrical; codominant.
86	Coast live oak	10	No	2	Low	Heavy lean; poor structure; crowded by neighbors.
87	Tree of heaven	10,6	No	3	Low	Pruned asymmetrical; codominant at 4 ft.
88	Lemon	6,6,6,6,6	No	3	Low	Off-site. topped; neighbors backyard; no tag; multiple attachments from base.

# Appraisal of Trees

434 Rose Ave.  
Pleasanton, CA



Tree No.	Species	Trunk Diameter (in.)	Heritage Tree?	Appraised Value
70	Coast live oak	36	Yes	\$22,850
71	Tree of heaven	26	Yes	\$0
72	Coast live oak	13	No	\$1,000
73	Valley oak	9	No	\$1,350
75	Holly oak	8	No	\$850
76	Holly oak	8	No	\$150
77	Tree of heaven	13,6	No	\$200
78	Valley oak	6	No	\$650
79	Coast live oak	9	No	\$500
80	Coast live oak	15,14,14	No	\$6,000
81	Coast live oak	14	No	\$1,950
82	Coast live oak	12	No	\$850
83	Tree of heaven	6,5	No	\$50
84	Holly oak	7	No	\$400
85	Valley oak	13	No	\$1,700
86	Coast live oak	10	No	\$600
87	Tree of heaven	10,6	No	\$100
88	Lemon	6,6,6,6,6	No	\$850
			<b>Total</b>	<b>\$40,050</b>