

## Appendix B Tree Survey and Arborist Report

## Appendix

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# Tree Survey and Arborist Report

*for an approximate 1.6-acre Site  
On the NE C/O of Glendora and Whitcomb Avenues  
In the City of Glendora, County of Los Angeles, California*



Prepared for:

**PlaceWorks, Inc.**

Contact: Jorge Estrada, *Senior Associate*

3 MacArthur Place, Suite 1100 | Santa Ana, California 92707

Prepared by:

**Golden State Land & Tree Assessment**

George J Wirtes, MS, RCA #738

*ISA Certified Arborist*

*Report Date: June 11, 2021*



**TABLE OF CONTENTS**

**Section 1: Executive Summary ..... 1**

**Section 2: Background ..... 2**

    2.1 - Project Location and Description ..... 2

    2.2 - Site and Vicinity Characteristics..... 3

    2.3 - Assignment and Scope of Survey ..... 4

    2.4 - Survey Method and Health Assessment ..... 4

    2.5 - Hazard Risk Assessment..... 5

    2.6 - Local Tree Regulation (Glendora Municipal Code Title 16) ..... 6

        2.6.1 - Tree Removal - Chapter 16:14 ..... 6

        2.6.2 - Urban Forestry Manual (Manual)..... 7

    2.7 - Limitations and Exceptions of Assessment ..... 8

**Section 3: Subject Trees and Observations ..... 10**

    3.1 - Species Assessment ..... 11

    3.2 - Observations ..... 15

**Section 4: Discussion and Recommendations ..... 19**

    4.1 - Conclusion..... 19

    4.2 - Discussion ..... 19

    4.3 - Recommendations..... 19

        4.3.1 - Tree Replacement..... 19

        4.3.2 - Trees Preserved..... 19

        4.3.3 - Migratory Bird Treaty Act..... 19

        4.3.4 - Tree Protection during Construction ..... 20

**Section 5: Qualifications Of Arborist ..... 21**

**Section 6: References ..... 22**

## **SECTION 1: EXECUTIVE SUMMARY**

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This arborist survey has been performed at the request of PlaceWorks, Inc. for a proposed 1.6-acre commercial development in the City of Glendora, California, in the County of Los Angeles. The site is completely developed and will be undergoing renovation. The field survey associated with this report was performed on May 7, 2021.

The subject trees were tagged with an aluminum tag containing a unique number. As part of this survey, details of each tree were recorded documenting their species, stature, health, local environment as well as conditions in which they occur. In all, 33 trees were assessed onsite involving 19 distinct species. The most common trees species onsite included the crape myrtle (*Lagerstroemia indica*) and Italian cypress (*Cupressus sempervirens*) composing 33.3% of all species within the project area. Due to the lack of maintenance and irrigation (mostly within eastern portion of the project site), many of the trees are diseased, infested, or having a poor growth form requiring removal. In addition, many of the healthy trees onsite have been poorly trimmed (topped) resulting in water sprouting, poor aesthetics, and/or poor branch attachment. In all, 18 (54.5%) of the trees onsite should be removed as part of the project; this is primarily based on the future use of the site as a place of worship with frequent visitation by people.

Of note are the two native trees observed on the property, western sycamore (*Platanus racemosa*) and coast live oak (*Quercus agrifolia*). The City of Glendora's Municipal Code and their Urban Forestry Manual outline provisions and guidelines for tree removal, installation, preservation, and maintenance within the City; this is especially important when considering native and special status tree species within the City. All trees that are intended for removal as part of a project require a permit for removal and must be approved by the Planning Director. The Director must approve final mitigation involving all replacement tree species and size.

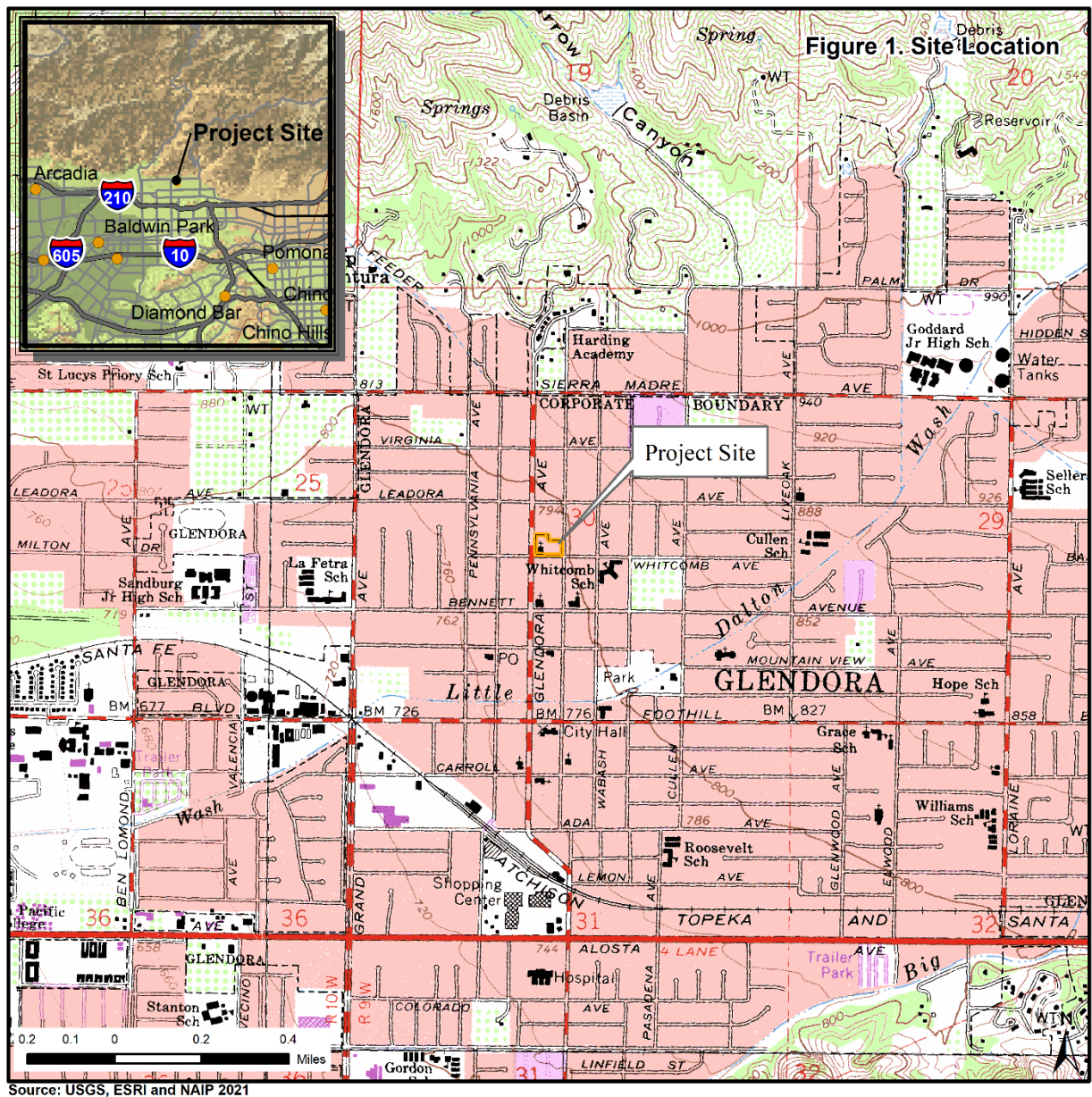
## **SECTION 2: BACKGROUND**

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### **2.1 - Project Location and Description**

The 1.6-acre site is located on the NE corner of N. Glendora and E. Whitcomb Avenues; it is approximately 2.8 miles from the intersection of the 57 FWY and Interstate 210 in the City of Glendora in the County of Los Angeles (see Figure 1 below).

The proposed project involves the demolition of several aging, former residential structures on the eastern portion of the church property, and the construction of additional structures to support the church facility and worship services. The project also includes associated hardscape, landscaping and infrastructure.



## 2.2 - Site and Vicinity Characteristics

The elevation of the site is at approximately 800 feet above mean sea level, and the topography slopes gently to the southwest. The local vicinity is within Sunset Zone 21 and USDA Hardiness Zone 10a. As indicated in Table 1 below, one distinct soil series occurs within the site boundary. This soil series is described by the Natural Resource Conservation Service (NRCS) as alluvium, derived from granite (see Table 1 below).

**Table 1. Soils on Site**

Map Unit Symbol	Map Unit Name	Acres	Percent
1002	<p><b>Urban land-Palmview-Tujunga complex, 0 to 5 percent slopes</b></p> <p><b>Setting</b></p> <ul style="list-style-type: none"> <li>• Landform: Alluvial fans</li> <li>• Landform position (three-dimensional): Tread</li> <li>• Down-slope shape: Linear</li> <li>• Across-slope shape: Linear</li> <li>• Parent material: Discontinuous human-transported material over alluvium derived from granite</li> </ul> <p><b>Typical profile</b></p> <ul style="list-style-type: none"> <li>• A - 0 to 5 inches: fine sandy loam</li> <li>• Au - 5 to 15 inches: fine sandy loam</li> <li>• 2C1 - 15 to 45 inches: fine sandy loam</li> <li>• 2C2 - 45 to 55 inches: fine sandy loam</li> <li>• 2C3 - 55 to 79 inches: fine sandy loam</li> </ul>	1.6	100.0%
<b>Totals for Area of Interest</b>		<b>1.6</b>	<b>100.0%</b>

The vegetation community onsite includes native and non-native, ornamental trees and shrubs as the project site is completely developed. The site contains remnant dwelling units, an historic building for worship services, temporary buildings, and a cement pad. The site can be easily accessed by pedestrian traffic.

**2.3 - Assignment and Scope of Survey**

Golden State Land & Tree Assessment (GSLTA) was retained to inventory all the trees within the project area, determine their species and level of significance, and make a determination as to each tree’s health for potential future preservation. Specifically, a health assessment was performed cataloging the health and stature parameters of each tree onsite; this included, but was not limited to: recording total diameter at breast height (DBH), canopy spread, tree height, apparent disease/decay, other signs of potential hazard, and pest damage. A potential risk assessment was also conducted keeping public safety in mind. All documentation in this report is in compliance with industry standards as well as requirements published by the International Society of Arboriculture (ISA). This report includes recommendations and mitigation measures meant to satisfy all applicable ordinances and permit guidelines.

**2.4 - Survey Method and Health Assessment**

Prior to the field survey, the City of Glendora’s website was accessed to review specific tree protection guidelines. An aerial photograph was used as a visual guide during the assessment. A handheld Global Positioning System (GPS) device and GPS-enabled smartphone with digitized project boundaries were used to identify the location of each subject tree. The crown-width was estimated by pacing, and the height of



each subject tree was visually estimated using a tangent height gauge. These data were recorded on field sheets, and associated aluminum numeric tags were affixed to trees on the north side at approximately 4.5 feet above grade for later reference. Aerial views were captured using a DJI Mavic Air 2 controlled by a DJI Fly smartphone app.

Tree status (relative condition, stature, and health) was conducted by ISA arborist/biologist, George Wirtes, RCA from ground level with the aid of binoculars. To estimate wood integrity, a rubber mallet was occasionally used to assess possible decay within the tree stem and flare. As indicated earlier, no invasive procedures were performed. Visual characteristics were recorded on field sheets, and twig/leaf samples as well as digital photographs were taken as needed to assure accurate identification. Overall health and general appearance of each tree was numerically rated (Health/General Appearance Rating - 1-Good, 2-Fair, 3-Poor, 4-Decline/dead) based on the aforementioned conditions. The local environment was also assessed in relation to the tree species and conditions of its location (Local Environment Rating - 1-Good, 2-Fair, 3-Poor, 4-Inappropriate). For this rating, the species was considered in relation to the environment. Other conditions were also considered such as fence lines, utilities, competing canopies, grade cuts/slope, etc.

The position of the subject trees was recorded using a GPS, whose data was exported into GIS for periodic illustration over aerial photographs.

## **2.5 - Hazard Risk Assessment**

The International Society of Arboriculture (ISA) recommends a Hazard Assessment to be included with arborist reports. Such an assessment is an important component of any report and is critical if trees are to be located near public areas such as parks, walkways, residences, and buildings. This tree assessment includes a *Level 2 Basic Risk Assessment* as defined by ISA Best Management Practices. This type of assessment is limited to evaluating trees and obvious signs of defects such as:

- Dead or broken structures
- Cracks
- Weakly attached branches and co-dominant stems
- Missing or decayed wood
- Unusual tree architecture or distribution
- Obvious loss of root support

A risk rating is assigned to each tree based on its defects, aesthetics, apparent health, location and the nearby targets (people or property). As defined by ISA, the ratings are defined below:

1. *Low* - Low-risk category applies when consequences are negligible, and likelihood is unlikely, or consequences are minor, and likelihood is somewhat likely.
2. *Moderate* - Moderate risk situations are those for which consequences are minor and likelihood is very likely or likely or likelihood is somewhat likely, and the consequences are significant or severe.
3. *High* - High-risk situations are those for which consequences are significant and likelihood is very likely or likely or Consequences are severe, and likelihood is likely.

4. *Extreme* - The extreme risk category applies in situations in which failure is imminent and there is a high likelihood of impacting the target and the consequence of the failure is severe. The tree risk assessor should recommend that mitigation measures be taken as soon as possible.

*It is impossible to maintain a tree free of risk.* A tree is considered hazardous when it has a structural defect that predisposes it to failure, and it is located near a target.

- A target is person or property that may sustain potential injury or property damage if a tree or a portion of a tree fails.
- Target areas include sidewalks, walkways, roads, vehicles, structures, playgrounds, or any other area where people are likely to gather.
- Structurally sound and healthy trees may also be hazardous if they interfere with utilities, roadways, walkways, and sidewalks, or if they obstruct motorist vision.
- Common hazards include dead and diseased trees, dead branches including bark, stubs from topping cuts, broken branches (hangers), multiple leaders, tight-angled crotches, and an unbalanced crown. Evaluation of risk is as follows: 1-Good, 2-Fair, 3-Poses risk, and 4-Hazardous.

## **2.6 - Local Tree Regulation (Glendora Municipal Code Title 16)**

### **2.6.1 - Tree Removal - Chapter 16:14**

The following provisions and guidelines are provided within the Municipal Code for the City of Glendora. These measures must be considered in addition to the City's Urban Forestry Manual (see Section 2.62 below).

1. The city forester shall authorize the removal of all parkway trees as well as those trees on city-owned property.
2. The city forester shall review all applications for parkway tree removal and determine whether the tree in question shall be removed.
3. If an unsafe or undesirable tree is to be removed, the planting of a new tree from the approved list of parkway trees may be required, as determined by the city forester.
4. Any oak tree removed from city-owned property or within a parkway shall be replaced with an oak or other tree as deemed appropriate by the city forester, at a location within the city of Glendora.
5. Tree Removal Criteria. The city forester may grant an application for tree removal after consideration of the following criteria:
  - The tree is dead or is determined to be in a state of severe decline such that it presents a high risk of failure, and is likely to cause damage to property and/or injury to persons;
  - The tree has acquired an infectious disease or is infested with an insect that is declared to be a serious pest threat to other nearby trees, after consideration of alternative infectious disease and pest control remediation measures;
  - The tree is healthy but presents an immediate threat to the public health, safety and welfare, and tree removal is determined to be the only option available. An example would be to gain access to property due to an emergency situation created by an earthquake or to allow repair of a broken water main or sewer line located directly underneath the tree's trunk, or to remove a tree split by a storm, or struck by a vehicle and the tree cannot be feasibly restored to a safe condition;

- The tree is a threat to the public health, safety and welfare because it impairs visibility for pedestrian or vehicle traffic. Removal shall be considered only if tree pruning would severely disfigure the tree as applied to applicable tree industry standards;
- The tree needs to be removed to facilitate hardscape repairs that cannot be completed without severe root pruning which would jeopardize the health and stability of the tree;
- The tree repeatedly damages surrounding hardscape within two years after repairs, and root pruning and/or other remedial repair methods cannot feasibly be utilized without severely jeopardizing the health and stability of the tree;
- The tree is causing structural damage to a building, and the condition cannot be corrected without removing the tree;
- Where the cost of maintaining certain species of trees cannot be justified with respect to the environmental and community benefits such trees provide;
- Any other criteria that protect the public health, safety and welfare and is consistent with promoting the city's policy to protect and preserve a healthy urban tree forest that provides valuable benefits to our environment and to the quality of life in Glendora.

### **2.6.2 - Urban Forestry Manual (Manual)**

The City's Community Development Services developed an urban forestry manual to assist in the preservation of the urban forest within the City and provide guidelines for City trees and within new developments. According to the document, the objectives of the manual are to communicate to City staff, City officials and Glendora residents the importance of the urban forest within the City, communicate the type of maintenance the urban forest requires to keep it healthy, and the policies (which the City shall enforce in order to maintain our urban forest in optimum condition).

This Manual provides guidance for development within the City. Relative to the project, the following is provided on page 21:

*The City of Glendora desires to maintain and further develop the local urban forest on public and private property. Consequently, the City shall consider the impact on private property trees as part of any application for discretionary zoning approval (i.e., Development Plan Review, CUP, etc.). In reviewing applications, the City Forester shall consider the impact on existing private trees and shall recommend project alternatives that encourage the preservation of mature trees. Trees that are removed from private property when done for the purpose of accommodating a project subject to discretionary zoning approval shall require replacement based on the following schedule.*

<u>Existing DBH</u>	<u>Replacement DBH or tree</u>
10"-15"	24" boxed tree – 1:1 replacement
16"-36"	36" boxed tree – 1:1 replacement
37"-48"	48" boxed tree – 2:1 replacement
49"-or greater	Tree replacement to be determined by the City Forester

Native Oak Trees are of particular importance to the community with respect to preservation. Mature Oaks on private property have a positive effect on property values and enhance the beauty of neighborhoods. Consequently, any Oak removed from private property with a DBH of 8" or more shall require replacement according to the size scale below:

<u>Existing DBH</u>	<u>Replacement DBH or tree</u>
8"-15"	36" boxed tree – 2:1 replacement
16"-36"	48" boxed tree – 3:1 replacement
37" or greater	Tree replacement to be determined by the City Forester

Multi-trunk trees, Oaks or other species, shall calculate the combined DBH of all trunk branches 4" DBH or greater. The replacement requirement shall be based on the tables above.

## **2.7 - Limitations and Exceptions of Assessment**

This survey was conducted in a manner that draws upon past education, acquired knowledge, training, experience, and research. It was conducted to the greatest extent feasible, and although the information gathered reduces risk of tree failure/decline, it does not fully remove it.

No diagnostic testing was performed during this assessment. This survey associated with this Arborist Report included no soil sampling, root excavation, trunk coring/drilling or any other invasive procedure. The determinations of damage due to pest infestation and decay were made solely on outward appearance and inspection of the tree structures. Not all tree defects may be visible from the ground. Epiphytic growth can also obscure defects on the stem and in the canopy of a tree. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms subject to attack by disease, insects, fungi and other forces of nature. Many aspects of tree health and environmental conditions

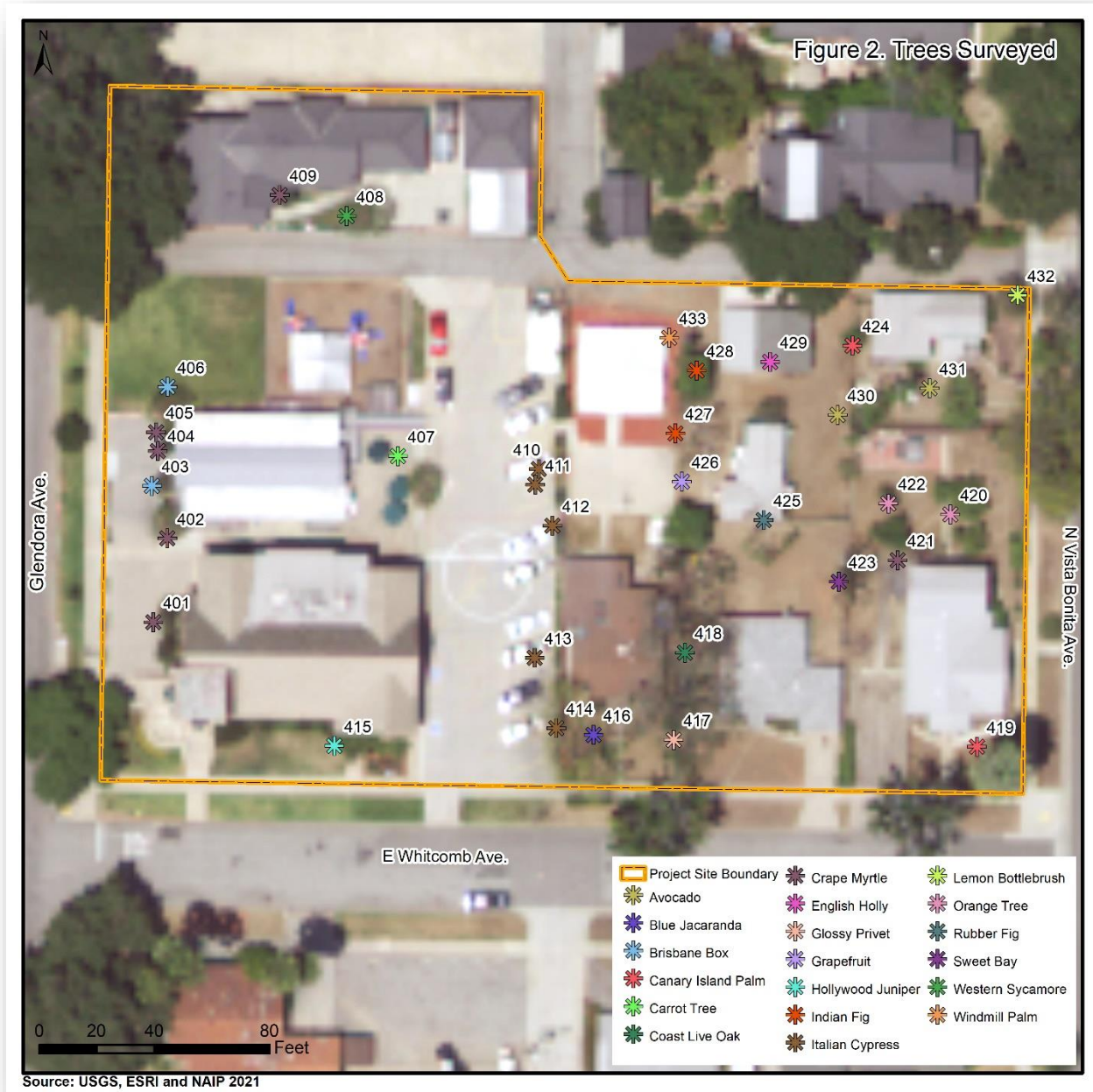
are often not detectable (internal decay, poor root anchoring, etc.). Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time.

The statements made in this report do not take into account the effects of climate/wind extremes, vandalism, or accident (whether physical, chemical, or fire). In addition, this area is known to have periodic, high velocity Santa Ana winds from transient high-pressure ridges. Golden State Land & Tree Assessment cannot, therefore, accept any liability in connection with these factors, or where prescribed work is not carried out in a correct and professional manner in accordance with current ISA good practice. The authority of this report ceases at any stated time limit within it, after one year from the date of the survey (if none stated), when any site conditions change, or after pruning (or other activity) not specified in this report.

The goal of this survey is to recommend measures to limit risk exposure while enhancing the beauty and health of each tree onsite. Clients may choose to accept or disregard the recommendations contained within this report, or seek additional advice. ***To live near trees is to accept some degree of risk. The only way to eliminate all risk is to remove all trees onsite.***

### SECTION 3: SUBJECT TREES AND OBSERVATIONS

As previously indicated, specific measurements and parameters of all trees onsite were recorded on tree assessment worksheets at the time of the survey; these data have been transferred into the table in Appendix A at the end of this document. In all, 33 trees consisting of 19 distinct species were assessed (see Figure 2 below). The age of the trees onsite ranged from mature to senescent and the health from rigorous to in significant decline.



### 3.1 - Species Assessment

During the survey, tree assessments were conducted according to general ISA guidelines and City requirements; GPS waypoints were recorded as were specific details of each tree. The tree species represented onsite are described in detail below, and a comprehensive table is provided in Appendix A of this report.

The most common tree species on site included the crape myrtle (*Lagerstroemia indica*), Italian cypress (*Cupressus sempervirens*) composing 33.3% of all species within the project area. In general, the species onsite were appropriate for the location. A species profile is provided below for each species observed along with their count (see Table 1 below).

**Table 2 – Tree Species Profile**

Name	Characteristics	Count
<p>Avocado tree <i>Persea americana</i></p>	<p>This species is native to South Central Mexico has evergreen foliage. There are many commercial varieties available of this species. They are generally resistant to oak root fungus. Cross pollination increases fruit crop. Height: 30-40 feet. Width: 25-35 feet. Its growth Rate is up to 36 Inches per Season. Longevity 50 to 150 years. Sunset Zones 16 - 17 and 19 - 24. USDA Hardiness Zones 9 - 11. It prefers exposure to full sun with moist, but well-drained soil composed of loam or sand texture that is slightly acidic to slightly alkaline soil pH. Its branch Strength Rated as medium and root damage potential is rated as high.</p>	<p>2</p>
<p>Brisbane Box <i>Lophostemon confertus</i></p>	<p>This species is drought resistant, and once established, is smog tolerant. This Native of Australia from the family Myrtaceae can be a larger tree in warmer areas. It grows erect or spreading and requires ample growing space with a rounded Shape when mature. It has Evergreen foliage. It typically attains a height of 30 - 50 feet with a width 10 - 30 feet. It grows approximately 24 to 36 Inches per Year with a Longevity 50 to 150 years. This tree or shrub has a shading capacity rated as, dense in leaf and its litter issue is dry fruit. It grows in Sunset Zones 15 - 17 and 19 - 24; H1, H2 and USDA Hardiness Zones 10 - 11. It tolerates exposure from full sun to partial shade. It is typically planted in moist to dry soil composed of clay, loam or sand texture with slightly acidic to highly alkaline soil pH. This species is susceptible to scales, phytophthora and root rot. Its branch strength rated as medium and its root damage potential rated as moderate.</p>	<p>2</p>
<p>Canary Island Palm** <i>Phoenix canariensis</i></p>	<p>This palm has evergreen foliage and has a feather palm shape. It is a species of flowering plant in the palm family <i>Aceraceae</i>, and is native to the Canary Islands. This species is one of the most common palms planted in California as it is heat tolerant and hearty. The Cal-IPC classifies this plant as having a limited invasive potential. The typical stature of this species is erect and requires ample growing space. Height: 50 - 60 feet. Width: 40 feet. Growth rate: 12 to 24 inches per year. This species can live for 50 to 150 years. Sunset zones 8, 9 and 12 - 24; h1, h2. USDA hardiness zones 9 - 11. This tree tolerate exposure to full sun. It prefers moist to dry soil composed of loam or sand texture. It can tolerate slightly acidic to highly alkaline soil pH. It is susceptible to Texas root rot, but this tree is susceptible to fusarium and root rot. Its branch strength rated as strong, and its root damage potential rated as moderate.</p>	<p>2</p>

<p>Carrot wood <i>Cupaniopsis anacardioides</i></p>	<p>This species is native to Australia and tolerates hot and dry winds. Some mature trees produce marble size fruits, which drop and can be a nuisance, some never fruit. Its growth habit is erect or spreading with a low canopy. Has evergreen foliage. Shading Capacity Rated as Moderate in Leaf. It reaches a height to 40 feet and a Width of 30 feet. Its growth rate is typically 12 to 24 Inches per Season and can live 50 to 150 years. It prefers moist soil clay, loam or sand type soil that is comprised of Clay, Loam or Sand Texture with a Slightly Acidic to Highly Alkaline Soil pH. Its branch strength is rated as medium weak. Its Root damage potential is rated as moderate.</p>	<p>1</p>
<p>Coast live oak * <i>Quercus agrifolia</i></p>	<p>This California native species is a massive but graceful tree. Its habit is spreading or weeping and requires ample growing space. Its form is oval, rounded or umbrella shape with evergreen foliage; it is an important native species. Height: 20 - 70 feet. Width: 110 feet. Growth Rate: 24 Inches per Season. Longevity Greater than 150 years. It prefers full sun to partial shade and moist to dry loam or sand textured soil. Its branch strength is rated as strong. this species is susceptible to gold spotted oak borer, aphids, beetle borers, beetle grubs, caterpillars, coddling moths, insect galls, scales and white fly, sudden oak death, crown rot, mistletoe, oak root rot, phytophthora, powdery mildew, root rot and sooty mold.</p>	<p>1</p>
<p>The coast live oak specimen on is a large and healthy one with a well-developed canopy. This tree is native to Southern California.</p>		
<p>Crape myrtle <i>Lagerstroemia indica</i></p>	<p>The Crape Myrtle tree is native to China and is a commonly used single or multi-trunk tree. It is commonly used as in the urban setting in Southern California for its flowering, foliage, and bark features. Erect or Spreading with a Low Canopy. Has Deciduous foliage. Height: 25 feet. Width: 25 feet. Growth Rate: 24 Inches per Year. Longevity 50 to 150 years. Exposure Full Sun. Moist to Dry Soil. Drought tolerant. Clay, Loam or Sand Texture. Branch Strength Rated as Medium. Root Damage Potential Rated as Low. Susceptible to Aphids, Powdery Mildew and Sooty Mold.</p>	<p>6</p>
<p>English Holly ** <i>Ilex aquifolium</i></p>	<p>This evergreen plant is classified as invasive by the California invasive plant council (Cal-IPC). Its rating is limited. It has thorns and is native to southern and central Europe and Great Britain. This species is in the family <i>Aquifoliaceae</i> and may be referred to as male and female. It can grow to a height of up to 40 feet, and a width of 25 feet; it grows approximately 36 inches per year with a longevity is approximately of 50 - 150 years. This tree or shrub has a shading capacity rated as, dense in leaf and its litter issue is wet fruit. Sunset Zones 4 - 9 and 14 - 17. USDA Hardiness Zones 7 - 9. This tree prefers exposure full sun to partial shade and prefers moist soil composed of a clay, loam or sand texture. It tolerates highly acidic to slightly alkaline soil pH. It is resistant to <i>Verticillium</i>. Susceptible to leaf miner, mealy bugs and scales, <i>Armillaria</i> and sooty mold. Its branch strength rated as medium, and its root damage potential rated as low. This tree is typically used as a screen or hedge.</p>	<p>1</p>
<p>Glossy privet <i>Ligustrum lucidum</i></p>	<p>The glossy privet tree is a member of the olive family <i>Oleaceae</i> and typically grows in USDA Hardiness zones 8-10. This small, tree species is evergreen, produces poisonous berries, and is considered invasive by the CA Invasive Plant Counsel. This species is ornamental, tolerates full sun, and has an Asian origin. Height: 35 - 50 feet. Growth Rate: 36 Inches per Year. Longevity 50 to 150 years.</p>	<p>1</p>



	<p>Exposure Full Sun to Partial Shade. Moist to Dry Soil. Drought tolerant. Clay, Loam or Sand Texture.</p> <p>Branch Strength Rated as Medium. Root Damage Potential Rated as Moderate.</p> <p>Susceptible to Aphids and Leaf Miner, Oak Root Rot, Phytophthora, Root Rot, Sooty Mold and Verticillium. It tolerates drought, and tolerates a wide pH range. It can live as long as 150 years and attracts wildlife.</p>	
<p>Grapefruit tree <i>Citrus × paradisi</i></p>	<p>This species is native to Barbados and is best suited for hot inland areas. This species has fragrant flowers. It has a compact and erect or spreading canopy. It has a rounded, umbrella or vase shape with evergreen foliage. It needs good drainage.</p> <p>Height: 25 - 30 feet. Width: 15 - 25 feet.</p> <p>Growth Rate: 24 Inches per Season. Longevity 50 to 150 years. This species thrives in Sunset Zones 8, 9, and 12 – 24 and USDA Hardiness Zones 10 - 12. It prefers Exposure to Full Sun with Moist Soil composed of Clay, Loam or Sand Texture with a Highly Acidic to Highly Alkaline Soil pH. Its branch strength rated as medium and root damage potential is rated as moderate.</p>	1
<p>Hollywood Juniper <i>Juniperus chinensis 'Torulosa'</i></p>	<p>This species is native to northeast Asia grows in China, Mongolia, Japan, Korea and the southeast of Russia. This tree is utility friendly tree and has irregular, twisted branches and fragrant leaves. It also has evergreen foliage. Trees may be referred to as male or female (dioecious), and it is part of the family, <i>Cupressaceae</i></p> <p>Height: 10 - 15 feet. Width: 6 - 10 feet.</p> <p>This tree has a growth rate of 24 inches per year and can live 40 to 150 years. The Sunset Zones include zones 1 – 24, and the USDA Hardiness Zones ranges 5 - 11. It tolerates exposure from Full Sun to Partial Shade. It also tolerates moist to Dry Soil consisting of Clay, Loam or Sand Texture.</p> <p>Highly Acidic to Highly Alkaline Soil pH.</p> <p>It is resistant to Texas root rot. Susceptible to beetle borers and spider mites, armillaria, root rot and rust. Its branch strength rated as medium strong and its root damage potential rated as low. Desirable wildlife plant and attracts birds.</p>	1
<p>Indian Laurel Fig <i>Ficus microcarpa</i></p>	<p>This tree species is native from the Malaysian peninsula to Borneo. It is a common street tree in California and is valued for its massive canopies with dark green foliage that stands in contrast with its light gray bark.</p> <p>Family: <i>Moraceae</i> has evergreen foliage.</p> <p>Height: 25 - 35 feet. Width: 35 - 40 feet.</p> <p>Growth rate: 24 inches per year. Longevity 50 to 150 years.</p> <p>Sunset zones 9, 13 and 16 - 24; USDA hardiness zones 9 - 12.</p> <p>Exposure full sun to partial shade.</p> <p>This tree thrives in moist soil composed of loam or sand texture. It thrives in slightly acidic to highly alkaline soil ph.</p> <p>Its branch strength rated as weak and root damage potential is rated as moderate. Susceptible to thrip.</p>	2
<p>Italian cypress <i>Cupressus sempervirens</i></p>	<p>This species is native to Southern Europe and Western Asia. It is smog tolerant and grows in a very narrow, upright form. Its canopy color is typically blue-green.</p> <p>Height: 60 - 70 feet. Width: 10 - 20 feet.</p> <p>Growth Rate: 36 Inches per Year.</p> <p>The longevity of this species is 50 to 150 years. Sunset Zones 4 - 24; H1, H2. USDA Hardiness Zones 8 - 10.</p> <p>Exposure Full Sun to Partial Shade. This species tolerates moist to dry soil. It is also drought tolerant. It can exist in clay, loam, or sand texture.</p> <p>Highly Acidic to Highly Alkaline Soil pH.</p> <p>Susceptible to spider mites, gummosis, <i>phytophthora</i> and root rot.</p> <p>Its branch strength rated as medium, and its root damage potential rated as moderate. It is a desirable plant to wildlife.</p>	5

<p>The Italian cypresses onsite occur in a row and may have been used a view screen for privacy in the past. They grow in the vicinity of a utility line.</p>		
<p>Jacaranda <i>Jacaranda mimosifolia</i></p>	<p>A beautiful, flowering tree from the seasonally dry tropics of South America. This species is native to northwestern Argentina and Bolivia. It has a spreading with a high canopy. Its growth habit is oval, rounded, umbrella or vase shape and has deciduous to partially deciduous foliage. It grows to a height of 40 - 50 feet. Width: 20 - 30 feet. Its growth Rate: 24 Inches per Season with a longevity 40 to 150 years.</p> <p>Sunset Zones 12 - 13 and 15 - 24; H1, H2. USDA Hardiness Zones 9 - 11. It prefers Exposure of Full Sun. It tolerates moist soil composed of loam or sand texture that is composed of Loam or Sand Texture that is Slightly Acidic to Neutral Soil pH. The shading capacity rated as moderately low in leaf. It is susceptible to aphids, <i>Phytophthora</i> and root rot. Its branch strength rated as weak, and its root damage potential rated as low.</p>	<p>1</p>
<p>Lemon Bottlebrush <i>Callistemon citrinus</i></p>	<p>This evergreen species is commonly grown as a shrub, or as a single-trunked standard tree. It is a tough, reliable evergreen species, with red brush-like flowers in hanging clusters. It is native to Eastern Australia and is from the family <i>Myrtaceae</i>. Its canopy is Rounded in Shape. Height: 20 - 25 feet. Width: 25 feet. It has a Growth Rate of 36 Inches per Year and can live 40 to 150 years. Its shading capacity rated as dense in leaf. Sunset Zones 8, 9 and 12 - 24; H1, H2. USDA Hardiness Zones 9 - 11. This species prefers exposure to full sun to partial shade. It thrives in moist to dry soil and is a drought tolerant tree. It tolerates clay, loam or sand textured soil that is slightly acidic to highly alkaline in pH. It is susceptible to chlorosis. Its branch strength rated as medium and its root damage potential rated as low.</p>	<p>1</p>
<p>Orange tree <i>Citrus sinensis</i></p>	<p>This species needs good drainage. It has a compact and erect or spreading with a low canopy with evergreen foliage. Height: 20 - 30 feet. Width: 15 - 25 feet. Growth Rate: 24 Inches per Season. Longevity 50 to 150 years. It prefers exposure full sun and clay, loam or sand texture soil. It is susceptible to aphids, mealy bugs, scales, spider mites, thrip and white fly, brown rot, chlorosis, crown rot, oak root rot, <i>phytophthora</i>, root rot, sooty mold and virus. Its branch strength rated as medium and root damage potential rated is low.</p>	<p>2</p>
<p>Rubber fig <i>Ficus elastica</i></p>	<p>One of the many widely cultivated <i>Ficus</i>, the rubber tree has several cultivated forms that vary in leaf color, variegation, and size. Although they are often sold as houseplants, these can become very large trees, as they do in the wild in northeast India, where they have large aerial roots. This monoecious tree is native to India and Malaysia and in the family <i>Moraceae</i>. It has a Rounded Shape with evergreen foliage. Height: 30 - 45 feet. Width: 25 - 30 feet. It can grow 24 or More Inches per Year. Sunset Zones 13, 16 - 17 and 19 - 24; H1, H2. USDA Hardiness Zones 10 - 12.</p> <p>Exposure full sun to partial shade. Its shading capacity rated as moderate to moderately dense in leaf. It thrives in well-drained soil composed of clay, loam or sand texture that is acidic to alkaline soil pH. It is susceptible to scales, and its root damage potential rated as high.</p>	<p>1</p>
<p>Sweet Bay <i>Laurus nobilis</i></p>	<p>Native to Mediterranean Region, this dioecious tree is often used as focal tree in garden and can be grown as a standard or as a multi-stemmed specimen. The leaves can be used for seasoning. These trees are from the family <i>Lauraceae</i> and are Conical or Rounded Shape with evergreen foliage. Height: 15 - 40 feet. Width: 15 - 30 feet. This tree can grow 12 to 24 Inches per Year and it can live 50 to 150 years.</p>	<p>1</p>

	<p>Shading Capacity Rated as Dense to Very Dense in Leaf.                  Sunset Zones 5 - 9 and 12 - 24; H1, H2. USDA Hardiness Zones 8 - 10.                  It prefers exposure of full sun to partial shade. It tolerates moist to dry soil composed clay, loam or sand texture with highly acidic to highly alkaline soil pH.                  Susceptible to psyllid and scales, <i>phytophthora</i> and root rot.</p> <p>Its branch strength rated as medium, and its root damage potential rated as moderate.</p>	
<p>Western sycamore *  <i>Platanus racemosa</i></p>	<p>This species is a riparian, California native tree that tolerates extreme heat and wind. Its form is erect or spreading and requires ample growing space. Its form is oval, rounded or umbrella shape. It has deciduous foliage.                  Height: 30 - 80 feet. Width: 20 - 50 feet.                  Growth Rate: 36 Inches per Season.                  Longevity Greater than 150 years.</p> <p>This species prefers exposure of full sun to partial shade with moist to dry soil. It tolerates clay, loam or sand textured soil. It is susceptible to leaf miner, scales and spider mites, anthracnose, oak root rot, <i>phytophthora</i>, mistletoe, <i>Apignomonina venata</i> and root rot. Its branch strength is rated as medium and its root damage potential is rated as moderate.</p>	1
<p>Windmill Palm  <i>Trachycarpus fortunei</i></p>	<p>This monocot tree species is native to Central China and is from the family <i>Arecaceae</i>. It grows erect with a low canopy and has a “hairy” stem, evergreen foliage, and a fragrant flower. It needs regular watering and good drainage.                  Height: 30 feet. Width: 10 feet.                  Its growth Rate is 24 to 36 Inches per Year and can live for 50 to 150 years.                  It flowers in spring. Has either male or female reproductive parts (dioecious).                  Its shading capacity rated as dense in leaf.                  Sunset Zones 4 - 24. USDA Hardiness Zones 9 - 10.                  It prefers exposure full sun to partial shade as well as moist soil composed of clay, loam or sand texture slightly acidic to highly alkaline soil pH.                  It is resistant to Texas root rot. Its branch strength rated as medium, and its root damage potential rated as low.</p>	1
<p>* CA Native species                  ** Cal-IPC (California Invasive Plant Council) invasive tree species</p>		

Source: UFEI 2021

### 3.2 - Observations

Due to the lack of maintenance and irrigation, many of the trees are diseased, infested, or having a poor growth form requiring removal; this holds true for the trees located within the eastern half of the site. In all, 18 (54.5%) of the trees onsite should be removed. The remaining 15 trees (45.5%) are in fair to good health and may be preserved as part of the project. The plates below include observations of the trees within the project area that are in decline or showing evidence of pest infestation and disease stemming from lack of irrigation and maintenance.



Plate 1. This is a view of water sprouting on a tree that had its branches topped (#406).



Plate 2. This is a view of a large canker running the length of a stem on a tree (#407).



Plate 3. This is a view of a diseased limb within the canopy of a tree (#407).



Plate 4. This is a view of a mal-formed canopy due to a topped central stem (#414).



Plate 5. This is a view of a tree with a significant lean and a poorly developed stem flare (#415).



Plate 6. This is a view of a poorly trimmed tree (topped) where water sprouting has resulted (#416).



Plate 7. This is a view of deadwood with boreholes stemming from an unclosed branch cut (#417).



Plate 8. This is a view of possible trunk rot on the stem of a palm tree (#419).



Plate 9. This is a view of severe decay on a stem (#420).



Plate 10. This is a view of a diseased tree in significant decline that has been topped (#423).



Plate 10. This is a view of topped tree with numerous emergent sprouts (#430).



Plate 10. This is a view of an unclosed branch cut (#427).

## **SECTION 4: DISCUSSION AND RECOMMENDATIONS**

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### **4.1 - Conclusion**

Within the project site boundary, 33 trees were assessed composed of 19 distinct species. Two trees onsite, the coast live oak (*Quercus agrifolia*) and western sycamore (*Platanus racemosa*) are native to California. No other trees onsite have any other special designations as described in the Municipal Code or Urban Forestry Manual. In all, 18 (54.5%) of the trees onsite should be removed due to the trees being diseased, infested, or having a poor growth form requiring removal, as demonstrated in Appendix A. The other 15 trees are in fair to good health and are eligible for preservation, as demonstrated in Appendix A.

### **4.2 - Discussion**

As indicated, many of the trees onsite are in poor condition due to inadequate irrigation, maintenance, and care; this is almost exclusively situation in the eastern portion of the site (an area slated to be demolished). It was also noted during the survey that many of the trees onsite were improperly trimmed, they were topped leading to weak form and poor branch attachment. Water sprouting was observed at the end of limbs trimmed in this manner.

### **4.3 - Recommendations**

#### **4.3.1 - Tree Replacement**

Removal of living, native and non-native trees may result a biological impact. Recommended mitigation for tree removal is replanting in accordance with the City's Municipal Code or Urban Forestry Manual. Removal of any trees must be preceded by authorization from the City's Planning Department and be replaced with an approved species in an approved-size container based on the diameter of the stem of the tree removed.

#### **4.3.2 - Trees Preserved**

An ongoing maintenance and monitoring plan is recommended for those trees preserved onsite; this is to ensure public safety and minimize liability due to potential tree failure. Strategic pruning compliant with ISA standards must be performed to subordinate non-primary, codominant stems, and canopy deadwood should be removed. Regular maintenance is recommended according to ISA standards.

#### **4.3.3 - Migratory Bird Treaty Act**

Pursuant to the Migratory Bird Treaty Act (MBTA) and CDFG Code, removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from early February through August, but can vary slightly from year to year based upon seasonal weather conditions.

#### **4.3.4 - Tree Protection during Construction**

Building/grading near trees requires that they are healthy at the start of the project for the stand to recover well. Some older trees have little tolerance for root damage or other stress factors. Younger, more vital trees are more tolerant of changes in their surroundings. However, each change in soil compaction, irrigation, under plantings, and other condition takes some of an older tree's strength and vigor and further diminishes its health. The main stresses and risks of construction are:

- Soil compaction
- Lack of water or changes in the site hydrology
- Change of grade in the root zone
- Physical damage to tree roots and structure
- Dumping of potentially toxic construction wastes
- Lack of pest control and other care
- Dust
- Human error

Mature trees take a long time to heal from, or respond to, injury. It could take 10 years for some trees to make a visible improvement in health after construction impacts occur. On the other hand, it could take 10 years for a tree to visibly start declining after cutting roots, compacting the soil, or raising the grade.

*Tree protection measures must be followed as described in the City's Urban Forestry Manual (see page 22 within the document for specific details for tree protection). Any items discussed within this manual supersede the measure described below.*

1. Dripline fencing must be placed a minimum of 1 foot in radius from the tree per 1 inch of diameter at breast height (for example, 6-inch trunk = 6 feet protection radius/12 feet diameter).
2. Dripline fencing must be erected so that it is visible and structurally sound enough to deter construction equipment, foot traffic, and the storing of equipment under tree canopies.
3. Raising or lowering the grade in the root zone of trees can be fatal or ruin the health of trees for years to come. Grade change and soil compaction force out the oxygen and literally press the life out of the soil. A retaining wall can be used to minimize the amount of the root zone that is affected, but it is essential that the footing is not continuous. Gravel and aeration pipes should be placed inside the retaining wall before the fill is placed. Consult with a qualified civil engineer for proper design calculations.
4. Trenching within the protection zone must be avoided wherever possible. Most of the roots are in the top 1 to 2 feet of soil, and trenching can sever a large percentage of roots.
5. Oil from construction equipment, cement, concrete washout, acid washes, paint, and solvents are toxic to tree roots. Signs should be posted on the fencing around trees notifying contractors of the fines for dumping. Portable latrines that are washed out with strong detergents can damage the fine roots of the trees. Portable latrines should not be placed near trees, nor where frequent and regular foot traffic to them will compact the soil below the trees.
6. Construction creates large amounts of dust, and the oaks and any other trees to be preserved will need to be kept clean. Dust reduces photosynthesis on all trees. Strict dust control measures must be implemented



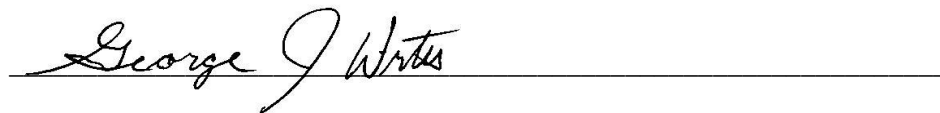
during construction to minimize this impact, and an occasional rinsing with a solution of water and insecticidal soap will help control pests.

## **SECTION 5: QUALIFICATIONS OF ARBORIST**

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Mr. Wirtes is a Certified Arborist (CH-08084) with the International Society of Arboriculture (ISA) and a Registered Consulting Arborist (RCA #738) with the American Society of Consulting Arborists. Mr. Wirtes was originally ISA Certified in November of 2005 and has conducted numerous tree assessments for residential properties that involve native and ornamental tree species. Most notably, Mr. Wirtes has created an oak regeneration plan and a Joshua tree protection plan as part of a mitigation effort within the Counties of Ventura and Los Angeles respectively. He has performed numerous tree surveys in Riverside, San Bernardino, and Los Angeles Counties on sites with as many as 500 trees. Mr. Wirtes' education includes a Bachelor of Science in Biology and a Master of Science in Environmental Science from California State University at Fullerton.

I certify that the details stated herein this report are true and accurate:



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George Wirtes, MS, RCA #738  
ISA Certified Arborist, CH-08084

## **SECTION 6: REFERENCES**

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<http://ucanr.edu/sites/treefail/>

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Virginia Tech, Dendrology Dept. 2021. Website at  
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Appendix A - Tree Species Observed

Note - This tree survey and the details recorded below are meant to characterize the trees within the property. The assessment is not exhaustive, but is a balance between the competing forces of in-depth description and cost effectiveness. The goal was to accumulate enough data to make a judgment as to what role, if any, the existing trees may have in the proposed project.

Tree Tag #	Species	DBH (inches)							Height (feet)	Canopy Width (feet)				Canopy Width (feet) (North on top)	
		1st Trunk	2nd Trunk	3rd Trunk	4th Trunk	5th Trunk	6th Trunk	Total		N	E	S	W		
401	Crape Myrtle	4						4	14	4	3	5	4	4	
Good form, good vigor														4	3
														5	
402	Crape Myrtle	4						4	13	5	4	5	4	5	
Good form, good vigor														4	4
														5	
403	Brisbane Box	13						13	25	6	5	7	6	6	
Poor aesthetics due to top cut, Cement over roots														6	5
														7	
404	Crape Myrtle	5						5	17	5	3	5	4	5	
Poor aesthetics, Topped														4	3
														5	
405	Crape Myrtle	5						5	17	6	5	6	6	6	
Topped, Good vigor, hedges adjacent to stem, Stem not exposed														6	5
														6	
406	Brisbane Box	11						11	24	10	6	8	8	10	
Topped, Good vigor														8	6
														8	
407	Carrot Tree	9.5						9.5	36	12	8	11	10	12	
Poor prognosis, Power line in canopy, Vigor good, Diseased, Fungal decay, Open cankers														10	8
														11	
408	Western Sycamore	13.5						13.5	29	11	14	10	11	11	
In powerlines, Topped, Stem sprouters, Fair to poor prognosis														11	14



**Tree Survey and Arborist Report**

														30		
419	Canary Island Palm	20						20	67	8	8	8	8	8	8	
Large canker at lower stem, Increased liability														8	8	
														8		
420	Orange Tree	3.5	4					7.5	12	6	3	5	5	6	3	
Large cankers on stem and branches, Vigor is fair to poor, Tree in decline														5	5	
														5		
421	Crape Myrtle	6	3.5	3.5				13	21	5	10	6	3	5	10	
Good vigor and stature														13	6	
														13		
422	Orange Tree	2.5	3	3	4			12.5	13	8	10	8	8	8	10	
Some branch decay, Decay at flare, Poor prognosis														8	8	
														8		
423	Sweet Bay	10	11	6	8	7		42	13	6	3	8	5	6	3	
Topped, poorly trimmed, Severe decline														5	8	
														5		
424	Canary Island Palm	3						3	12	7	7	7	7	7	7	
Good health and vigor														7	7	
														7		
425	Rubber Fig	7	10	8				25	24	3	12	12	10	3	12	
Surficial roots, Internal stem decay, Increased liability, Water sprouting														10	12	
														10		
426	Grapefruit	7						7	10	6	4	1	5	6	4	
Topped, Poor aesthetics, Canopy in utility lines														5	1	
														5		
427	Indian Fig	12	11	8				31	23	6	10	12	10	6	10	
Crowded canopy with # 428, Poorly pruned, Internal decay, Significant decline, Poor crown development														10	12	
														10		
428	Indian Fig	17	8					25	24	11	11	10	10	11	11	
Crowded canopy with #427, Poorly pruned, Internal decay, Significant decline, Poor crown development														10	11	
														10		

**Tree Survey and Arborist Report**

														10	
429	English Holly	4	6	5	5	4		24	13	3	4	0	4	3	
Topped, Internal decay, Canopy in utility lines														4	4
														0	
430	Avocado	16						16	6.5	1	2	5	6	1	
Lean to South, Topped, Internal decay, Stump with sprouters, Poor aesthetics														6	2
														5	
431	Avocado	18						18	17	6	3	8	8	6	
Lean to West, Tree in decline, Topped, Decay at flare														8	3
														8	
432	Lemon Bottlebrush	6	6	4				16	13	6	11	8	3	6	
Good vigor														3	11
														8	
433	Windmill Palm	5						5	23	5	5	5	5	5	
Preserve, Good vigor														5	5
														5	

