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# Tree Risk Assessment Summary Report

840 Guadalupe Parkway, San Jose

July 2024



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# Summary

In July 2024, Davey Resource Group (DRG) was contracted by Ruben Castro to conduct a basic tree risk assessment (Level 2) for one (1) tree that was indicated by the client on the property at 840 Guadalupe Parkway in San Jose, CA.

An International Society of Arboriculture (ISA) Certified Arborist and Certified Tree Risk Assessor from Davey Resource Group conducted the assessment of the tree on July 9, 2024. The tree was assessed by location, size, current condition, and overall health. The data were then used to determine a risk rating. The current edition of the Tree Risk Assessment in Urban Areas and the Urban/Rural Interface (version 1.5) was used to guide the risk rating of the tree as well as the potential strategies for care and risk abatement. There are many factors that can limit specific and accurate data when performing evaluations of trees, their conditions, and their values. The determinations and recommendations presented here are based on current data and conditions that existed at the time of the evaluation and cannot be a predictor of the ultimate outcomes for the tree.

The assessment was requested by Mr. Ruben Castro to conduct an assessment of the tree based on its condition and to determine if any mitigation measures were recommended. The assessment determined the following:

- One (1) tree was assessed, consisting of one (1) species: honey locust (*Gleditsia triacanthos*).
- The inventory encompasses only the specific tree(s) on the property specified by Mr. Castro.
- The subject tree was in fair condition.
- Tree height is 40 feet.
- Tree diameter at four and a half feet above grade/breast height (DBH) is 15 inches.
- The risk rating for the subject tree is 'moderate'.
- Removal of the tree is recommended.

### Introduction

#### Background

Mr. Ruben Castro contacted DRG to conduct an assessment of one specific tree on the property at 840 Guadalupe Parkway in San Jose. Due to recent large branch/canopy failure, they are concerned with the remaining risk the tree poses. The tree that was indicated by the client was assessed using a Basic Tree Risk Assessment (Level 2).

### Assignment

The arborist visually assessed the tree and the required tree data were collected using a portable tablet device. The tree was visually assessed, trunk sounding with a mallet was conducted, and the tree was photo documented so that changes in condition can be evaluated if needed.

#### Limits of the Assignment

Many factors can limit specific and accurate data when performing evaluations of trees, their conditions, and the potential for failure or response to site disturbances. No soil or tissue testing was performed. All observations were made from the ground on July 9, 2024, and no soil excavation to expose roots was performed. The determinations and recommendations presented here are based on current data and



conditions that existed at the time of the evaluation and cannot be a predictor of the ultimate outcome for the evaluated tres in the future. No physical inspection of the upper canopy, resistance drilling, or other technologies were used in the evaluation of the tree.

### Purpose and Use of Report

The purpose of this report is to provide a summary inventory of the specified trees identified by the client within the area of risk, including an assessment of the current condition and health. The findings in this report can be used to make informed decisions on the long-term guided care of the tree(s).

### **Observations**

### Methods

A visual inspection was used to develop the findings, conclusions, and recommendations found in this report. Data collection included measuring the diameter of the subject tree at approximately 54 inches above grade (DBH), height estimation, a visual assessment of tree condition, structure, and health, and a photographic record. A rating percentage (0-100%) was assigned for each tree's health, structure, and form, and the lowest percentage was used as the overall tree condition. A sounding mallet was used during the site visit to determine the density of the trunk and if any internal decay could be detected.

### **Site Observations**

The project site is located in the City of San Jose at the Juvenile Center. The tree is in a planter with a picnic table directly under the tree. There are other trees throughout the property and most of the trees were in planters surrounded by existing pathways, benches and picnic tables. There is high foot traffic due to the site being at a Juvenile Center and the tree being close to the public right of way.

### Tree Observations

One (1) tree was assessed within the area, comprising of one (1) species: honey locust (*Gleditsia triacanthos*). The tree is mature and overall tree condition rating was fair for this tree. Tree diameter was 15 inches and tree height was 40 feet.

A map of the site and tree location can be found in Appendix A below. A complete Tree Inventory and Condition Assessment can be found in Appendix B. Risk Rating and Likelihood can be found in Appendix C. Tree photographs can be found in Appendix D.

# **Risk Assessment Methodology**

This evaluation follows the tree risk assessment methods developed by the International Society of Arboriculture. It consists of an inspection of the visible tree parts including surface roots, trunk, scaffold limbs, and canopy. Hazard and risk assessments result in a risk rating for each individual tree to help quantify the level of risk accepted by the tree's owner. This rating is obtained by assessing and assigning a value to the failure potential, identifying the size of the tree part most likely to fail (e.g., branch, one stem, or whole tree), and determining the site used around the affected tree. Each of these three characteristics is assessed as follows:

**Conditions of Concern** – Describes the part most likely to fail. The larger the tree part, the greater the potential for damage; therefore, the size of the failure part affects the overall hazard potential, and is described according to:

• Part Size - Typically the diameter of the limb or tree part



- Fall Distance The distance of the part from the ground
- Target The presence of any target(s) that could be impacted by failure

**Likelihood of Failure** – Identifies the most likely point of failure and rates the likelihood that the observed defect(s) will result in part failure. Failure potential is rated as:

- Improbable (defects are minor and unlikely to result in failure)
- Possible (defects are present and of concern)
- Probable (compounding and/or significant defects present)
- Imminent (defects are serious and imminent failure is likely)

**Likelihood of Impact** – Identifies the most likely point of failure and rates the likelihood that the structural defect(s) will impact the potential targets. Likelihood of impact is rated as:

- Very Low (Occasional use, as in a forest landscape)
- Low (e.g., tree lawn, sidewalk, park path)
- Medium (buildings or people within striking range more than 50% of the time)
- High (Constant and frequent use of the area within striking distance)

**Consequences of Failure** – Rates the level of damage caused by the defective part in the event of failure. The consequences of failure are rated as:

- Negligible (typically small branches <1" diameter, unlikely to cause damage)
- Minor (branches 1-2" diameter, may cause damage)
- Significant (damage would occur)
- Severe (failure would result in major damage)

**Overall Risk Rating -** The values assigned to condition, likelihood and consequences are summarized into an overall risk rating of Low to Extreme for each tree:

- Low (risk is present, mitigation measures may not be required)
- Moderate (mitigation advised within normal maintenance cycle)
- High (mitigation advised within the year)
- Extreme (mitigation necessary as soon as practical)

In addition to a risk rating, the trees were also prescribed maintenance recommendations based on general tree health and visual observations. A high-risk rating alone does not necessarily result in a removal recommendation. Conversely, trees with a lower rating may be prescribed for removal based on other factors such as location and species compatibility and/or the severity of specific defects. Whenever recommended tree maintenance would mitigate risk, the residual risk was also noted.

A visual inspection was the primary method used to develop the findings, conclusions, and recommendations found in this report. Data collection included measuring the diameter of the tree at 4.5 feet above grade, height estimation, canopy radius estimation, a visual assessment of tree condition, structure and health, trunk sounding with a mallet, and a photographic record. Qualitative value assessments grade the attributes of the tree, including structure and canopy health, to obtain an overall condition rating. No physical inspection of the upper canopy, root crown excavation, resistance drilling, or other technologies were used in the evaluation of the tree. ISA has advised that risk forms are considered "work product" and are no longer provided.

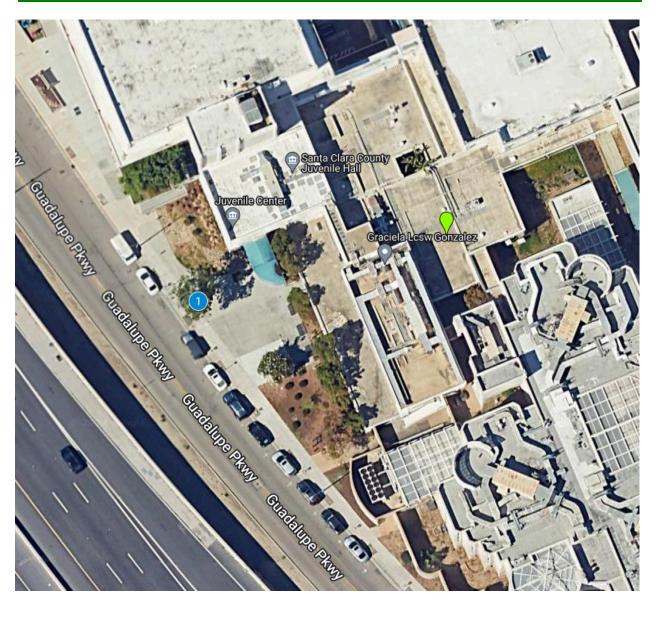




Tree defects and conditions affecting the likelihood of failure were assessed around the Root Collar, the Trunk and the Crown.



# Appendix A – Location Map





# Appendix B – Tables

### Table 1. Summary Tree Risk Assessment Results

Tree #	Species	Maintenance Action	Maintenance Priority	Defects	
1	Gleditsia triacanthos	Removal	Within 1 year	Decay in the trunk, hollow feedback from sounding, previous half tree failure, small deadwood, and unbalanced canopy.	

# Table 2. Tree Inventory and Condition Assessment - July 2024

Tree #	DBH (in.)	Common Name	Botanical Name	Ht (ft)	Health (%)	Structure (%)	Form (%)	Condition
1	15	honey locust	Gleditsia triacanthos	40	60	60	55	Fair

80-100% - Good; 51-79% - Fair; 30-50% - Poor; 1-29% - Critical; 0 - Dead





# Summary Tree Risk Assessment Results

### Tree #1

Species: honey locust, *Gleditsia triacanthos* DBH: 15" Height: 40' Vigor: Fair

#### Tree Defect Observations

Damage/decay to the trunk, large canopy failure, unbalanced canopy.

### **Risk Categorization**

Likelihood of trunk failure is probable with a high likelihood of impacting the picnic bench/walking path in the area within 3 years. The consequences of the likely failure would be minor if no people or vehicles were present at the time of failure. Consequences would be higher if the site was occupied. The risk rating is Moderate.

#### Overall tree risk rating: Moderate

#### **Mitigation Options**

Trim deadwood and branch end weight to reduce load Remove Tree <u>Remaining risk after trim: Moderate</u> <u>Remaining risk after mitigation: None</u>



# Appendix C – Risk Rating and Likelihood

The technique used to define the risk of failure and likelihood of failure involves solving for these values within two matrices. These matrices are reproduced here from the International Society of Arboriculture data sheets for Tree Risk Assessment, 2015.

(http://www.isa-arbor.com/education/resources/basictreeriskassessmentform\_firstedition.pdf)

Likelihood Of	Likelihood of Impacting Target					
Failure	Very Low	Low	Medium	High		
Imminent	Unlikely	Somewhat likely	Likely	Very likely		
Probable	Unlikely	Unlikely	Somewhat likely	Likely		
Possible	Unlikely	Unlikely	Unlikely	Somewhat likely		
Improbable	Unlikely	Unlikely	Unlikely	Unlikely		

Matrix I. Likelihood Matrix

#### Matrix II. Risk Rating Matrix

Likelihood Of	Consequences of Failure					
Failure & Impact	Negligible	Minor	Significant	Severe		
Very likely	Low	Moderate	High	Extreme		
Likely	Low	Moderate	High	High		
Somewhat likely	Low	Low	Moderate	Moderate		
Unlikely	Low	Low	Low	Low		



# **Conclusion and Recommendations**

A Basic Tree Risk Assessments (Level 2) were performed on one (1) tree as indicated by the client Ruben Castro. The assessed tree was in fair condition. There is no evidence of recent change around the trunk, such as soil cracking or roots lifting, and the tree appears well-rooted and stable at this time. The final findings for the trees are:

- Tree #1 had a risk rating of moderate for trunk failure. The tree has some decay in the trunk and sound feedback that should be monitored if the tree is retained. The canopy can be pruned to reduce the end weight, but nothing can reverse the decay. Once the deadwood is removed the remaining risk stays the same. When the majority of the canopy previously failed, it caused excess stress to the tree. Removing the tree is the only way to eliminate all risk. Should the client decide to retain the tree, monitoring every three to five years or after major storm events should be done. To reduce the risk while the tree is present, moving the picnic bench is recommended. Ultimately the tolerance of risk is set by the tree manager, but removal of this tree is recommended. According to the Santa Clara County municipal code <u>Sec. C16-4</u> this tree falls under an exception shall the Planning Director, or his or her designee deems the risk too high then no permit is required.
- Target ratings (occupancy rate) were constant with a high likelihood of impacting the targets.
- Completely removing the tree is the only way to eliminate all risk. Ultimately, the acceptable tolerance of risk is set by the tree managers.



# Appendix D – Tree Photos Additional photos available upon request



Photo 1. Tree # 1 is located next to a picnic bench. Trunk decay and the missing canopy from the previous failure are shown in this photo.





Photo 2. Closer view of the decay in the trunk. There was sounding feedback in the trunk indicating internal decay.



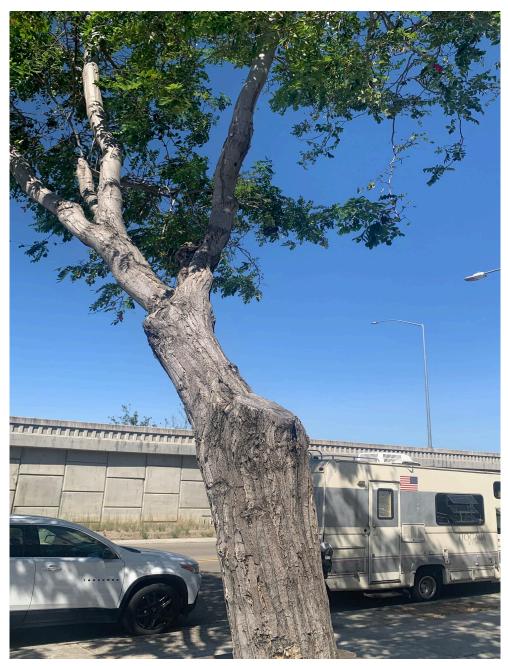


Photo 3. A closer view of the trunk where the previous failure occurred.





Photo 4. Another view of the base of the trunk, and the decay at the base.