

Tree Management Experts

Consulting Arborists

3109 Sacramento Street
San Francisco, CA 94115

Member, American Society of Consulting Arborists
Certified Arborists, Tree Risk Assessment Qualified



City of Albany

Attn: John Hawkrigde, Urban Forester
540 Cleveland Avenue
Albany, CA 94710

RE: Jewel's Terrace Park

Date: 8/22/23

ARBORIST MEMORANDUM

Assignment

- Provide field inspections to evaluate all trees 3-inches diameter and larger trees.
- Use visual assessment for risk (TRAQ Level 2) for larger trees that are not low risk.
- The minimum data collected will include:
 - Identification by tree tag number
 - Tree species
 - Height (visually assessed)
 - dbh (measured)
 - Canopy spread (visually assessed)
 - Tree condition rating (health)
 - Tree condition rating (structure)
 - Tree risk rating (TRAQ matrices)
 - Defect or issue, if any
 - Recommended maintenance, if any
 - Maintenance priority
- Provide an Arborist Report of findings and recommendations for advanced assessments, pruning and removal.

Methodology

The property was visited by Aaron Wang on July 31, 2023 to evaluate the trees in question.

Field work was conducted using a custom form in KoboCollect running on an Android smartphone connected to a Sparkfun Facet Precision GNSS Unit, used as the field GPS and data recorder. Maps were created in ArcGIS Pro and are Georeferenced so they can be used with mobile GPS apps (e.g. Avenza).

For risk assessments, the target was a considered to be a pedestrian using the park in a normal manner and, in the case of trees in striking distance of neighboring properties, those properties were also considered as targets.

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Analysis

25 trees were assessed. 18 were found to be Low Risk, 5 were found to be Moderate Risk, and 1 was found to be High Risk. 5 trees were recommended for removal.

Risk ratings take into account the occupancy rate of a target area, the likelihood of failure, and the expected damage if a tree part strikes a target. A dead tree that could fall any minute in the middle of an uninhabited forest has no target and thus is low risk. A single small broken limb from a tree hanging over a busy freeway could strike a car or cause one to swerve and cause a fatal collision, and could be considered an extreme risk. Tree risk is assessed by Tree Risk Assessment Qualified (TRAQ) arborists and provides a rating that can be included in decisions by a property manager.

The trees in the park are overall in fairly good condition, but some pose hazards.

The camphor trees on site are reaching the end of their useful lives and will require removal as they continue to decline, they may fail unpredictably but regular maintenance can reduce the risk of failure until the trees are removed.

The large incense cedars and deodar cedar at the south end of the park are in good condition, but as their size presents an increased hazard, they require regular pruning to help mitigate the risk presented by the large heavy limbs.

The smaller trees in the park are in fair condition except for the Chitalpa, they will require normal maintenance.

The large deodar cedar at the north end of the park requires regular pruning as it overhangs the play areas.

Data Interpretation

Tree Data

Tag #: The number engraved on the tag affixed to the tree to identify it in the field. A 1-1/4" circular aluminum tree tag affixed with an aluminum nail is attached to each tree. Where a Tag # of "0" is given, the tag is either missing, enclosed by the tree, or damaged.

Tree #: The unique identifier used by the database to identify each tree record.

Park: Name property where tree was found

Species: Binomial name used to identify the species of the subject tree.

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DBH: Diameter at Breast Height (*d*) (DBH) of the stems(s) measured by taking a circumference (*C*) at a point on the tree 54 inches above ground level using a measuring tape marked in increments of π -inches.

Height: The average height of the tree in feet as determined by eye in the field.

Spread: The average spread of the canopy of the tree in feet as determined by eye and pacing in the field.

Health: A percentage rating of the condition, in terms of health, of the tree, ranging from 0% (dead), 30% very poor (the lowest live condition), to 100% (an ideal specimen).

Structure: A percentage rating of the condition, in terms of structure, of the tree, ranging from 0% (dead), 30% very poor (the lowest live condition), to 100% (an ideal specimen).

Defect: Specific issue found in the tree.

Overall Risk Rating: A rating of the risk presented by a tree, ranging from Low to Moderate, High, and Extreme.

Specifications: The type of work needed on the tree to help improve health and mitigate risk.

Additional Specifications: Amplifying remarks on the work necessary on the tree.

Work Priority: The relative priority of work prescribed for the tree. Includes 1-high to 5-low.

GPS Coordinates: Precise Latitude and Longitude coordinates recorded for the tree, usually accurate within 1-20 cm.

Notes: Additional notes on the condition of the tree.

TRAQ Data

Tree #: The unique identifier used by the database to identify each tree record.

TRAQ Failure Mode: the part of the tree being assessed for failure risk, divided into: branch, trunk, or roots.

Overall Risk Rating: Highest Risk Rating for all TRAQ scenarios analyzed.

Target of Concern: The target for the failure scenario being considered.

Probability of Failure: The possibility of the tree part under consideration failing, rated with increasing likelihood as Improbable, Possible, Probable, and Imminent.

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Likelihood of Impact: The probability of a failure of the tree part impacting a target, based on frequency and duration of occupancy, rated in increasing order as Very Low, Low, Medium, and High.

Failure & Impact: Based on the previous two ratings, the combined probability of a tree part failing and striking a target, rated in increasing order as Unlikely, Somewhat Likely, Likely, and Very Likely.

Consequences: The consequences resulting from a tree part striking an unprotected target. Rated in increasing order as Negligible, Minor, Significant, and Severe.

Risk Rating: The result of the combined Failure & Impact and Consequences. Rated in increasing order as Low, Moderate, High, and Extreme.

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Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Title and ownership of all property considered are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible. The consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. Various diagrams, sketches and photographs in this report are intended as visual aids and are not to scale, unless specifically stated as such on the drawing. These communication tools in no way substitute for nor should be construed as surveys, architectural or engineering drawings.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior written or verbal consent of the consultant.
7. This report is confidential and to be distributed only to the individual or entity to whom it is addressed. Any or all of the contents of this report may be conveyed to another party only with the express prior written or verbal consent of the consultant. Such limitations apply to the original report, a copy, facsimile, scanned image or digital version thereof.
8. This report represents the opinion of the consultant. In no way is the consultant's fee contingent upon a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. The consultant shall not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule, an agreement or a contract.
10. Information contained in this report reflects observations made only to those items described and only reflects the condition of those items at the time of the site visit. Furthermore, the inspection is limited to visual examination of items and elements at the site, unless expressly stated otherwise. There is no expressed or implied warranty or guarantee that problems or deficiencies of the plants or property inspected may not arise in the future.

Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

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Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. An arborist cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate the trees.

Certification of Performance

I, Aaron Wang, Certify:

- That we have inspected the trees and/or property evaluated in this report. We have stated findings accurately, insofar as the limitations of the Assignment and within the extent and context identified by this report;
- That we have no current or prospective interest in the vegetation or any real estate that is the subject of this report, and have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions and conclusions stated herein are original and are based on current scientific procedures and facts and according to commonly accepted arboricultural practices;
- That no significant professional assistance was provided, except as indicated by the inclusion of another professional report within this report;
- That compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I am a member and Certified Arborist with the International Society of Arboriculture.

I have attained professional training in all areas of knowledge asserted through this report by completion of a Bachelor of Science degree in Forestry and Natural Resources, by routinely attending pertinent professional conferences and by reading current research from professional journals, books and other media.

I have rendered professional services in a full-time capacity in the field of horticulture and arboriculture for more than 10 years.

Signed: 
Certified Arborist MW-5597A

Date: 8/22/2023

City of Albany
Jewel's Terrace Park
Tree Data Summary

Tree # Tag #	Park	Identifying Information			Defects												Specifications										GPS Coordinates		Notes			
		Species	DBH (in)	Height (ft)	Spread (ft)	Health (%)	Structure (%)	Codominant Stems/ Weak Attachments	Dead Wood/Hanger	Lean/Sweep	Confined/Girdling Roots	Included Bark	Topped/Poor Structure	Suppressed/Crowded	Decay	Declining/Dying/Dead	No Tag/Replace Tag	Overall Risk Rating	Remove Monitor	Structural Training	Crown Clean	End-Weight Reduction	Balance	Clearance	Root Collar Excavation	Supplemental Support	Other	Additional Specifications		Work Priority	Latitude	Longitude
0 87	Jewel's Terrace Park	Rhamnus alaternus	6	10	10	50	70									X	Low												4	37.88566632	-122.2869172	
0 88	Jewel's Terrace Park	Aesculus californica	7	10	10	70	70									X	Low												3	37.88560264	-122.2867023	
464 89	Jewel's Terrace Park	Cedrus deodara	25	40	30	70	60		X								Moderate			X		X			X				2	37.88547747	-122.286857	
0 90	Jewel's Terrace Park	Pittosporum undulatum	7	20	20	30	50								X	X	Low		X										3	37.88543993	-122.2866627	
0 91	Jewel's Terrace Park	Unknown	6	20	10	0	0								X	X	Moderate		X										1	37.88540387	-122.2866693	
463 92	Jewel's Terrace Park	Cinnamomum camphora	22	30	30	30	30								X		High		X										2	37.88538012	-122.2866821	
462 93	Jewel's Terrace Park	Cinnamomum camphora	28	30	40	20	30								X	X	Moderate		X										2	37.88531802	-122.2867139	
460 94	Jewel's Terrace Park	Cinnamomum camphora	30	30	40	60	60		X								Low				X	X							3	37.88505921	-122.2868118	
459 95	Jewel's Terrace Park	Cinnamomum camphora	22	30	30	60	60										Low												3	37.88497754	-122.2868922	
0 96	Jewel's Terrace Park	Cupressus sp.	7	20	10	60	50			X						X	Low				X		X						4	37.88464859	-122.286967	
0 97	Jewel's Terrace Park	Prunus cerasifera	10	20	20	70	60									X	Low			X	X								4	37.88457699	-122.287	
458 98	Jewel's Terrace Park	Cedrus deodara	32	50	40	70	60		X								Moderate				X	X		X					3	37.88481044	-122.2869547	
457 99	Jewel's Terrace Park	Calocedrus decurrens	27	50	40	70	60	X									Moderate				X	X							3	37.8848108	-122.2870097	
0 100	Jewel's Terrace Park	x Chitalpa	4	10	10	70	30						X			X	Low			X							Stake dependent, Replace, stake properly		3	37.8848913	-122.2870251	
0 101	Jewel's Terrace Park	Pinus pinea	11	20	10	70	70									X	Low				X	X							5	37.88491874	-122.286997	
456 102	Jewel's Terrace Park	Calocedrus decurrens	26	40	20	60	60								X		Moderate				X								3	37.88485523	-122.2870896	
469 103	Jewel's Terrace Park	Pinus radiata	13	40	20	60	60								X		Low				X	X		X					3	37.88487896	-122.2872821	
0 104	Jewel's Terrace Park	Prunus persica	5	10	20	50	50								X	X	Low				X	X							4	37.88489988	-122.2872715	
0 105	Jewel's Terrace Park	Prunus persica	4	10	10	40	60								X	X	Low				X	X							4	37.88496163	-122.2872914	
0 106	Jewel's Terrace Park	Liriodendron tulipifera	13	40	30	70	60									X	Low				X	X							3	37.88497118	-122.2872355	
454 107	Jewel's Terrace Park	Calocedrus decurrens	26	40	30	60	60										Low				X	X							3	37.88514565	-122.2872135	
0 108	Jewel's Terrace Park	Quercus agrifolia	4	10	10	70	60								X		Low				X	X					Remove stakes		2	37.88530017	-122.2871465	
0 109	Jewel's Terrace Park	Quercus palustris	7	20	20	70	60								X		Low				X	X		X					2	37.88537842	-122.2871269	
0 110	Jewel's Terrace Park	Acer rubrum	10	40	30	70	60								X		Low			X	X	X							3	37.8854481	-122.2870986	
0 111	Jewel's Terrace Park	Ginkgo biloba	8	20	20	70	70									X	Low				X	X		X					3	37.88552009	-122.2870656	

City of Albany
Jewel's Terrace Park
TRAQ Data

Tag #	Tree #	Identifying Information		TRAQ Failure Mode			TRAQ Branch Assessment							TRAQ Trunk Assessment					TRAQ Root Assessment										
		Park	Species	Branch	Trunk	Roots	Overall Risk Rating	Target of Concern	Occupancy	Likelihood of Failure	Likelihood of Impact	Likelihood of Failure & Impact	Consequences	Tree Risk	Target of Concern	Occupancy	Likelihood of Failure	Likelihood of Impact	Likelihood of Failure & Impact	Consequences	Tree Risk	Target of Concern	Occupancy	Likelihood of Failure	Likelihood of Impact	Likelihood of Failure & Impact	Consequences	Tree Risk	
0	87	Jewel's Terrace Park	Rhamnus alaternus				Low																						
0	88	Jewel's Terrace Park	Aesculus californica				Low																						
464	89	Jewel's Terrace Park	Cedrus deodara	X			Moderate	Playground	Frequent	Probable	Medium	Somewhat Likely	Severe	Moderate															
0	90	Jewel's Terrace Park	Pittosporum undulatum				Low																						
0	91	Jewel's Terrace Park	Unknown			X	Moderate															Playground	Frequent	Imminent	Medium	Likely	Minor	Moderate	
463	92	Jewel's Terrace Park	Cinnamomum camphora	X		X	High	Playground	Frequent	Probable	Medium	Somewhat Likely	Severe	Moderate								Playground	Frequent	Probable	High	Likely	Somewhat	Severe	High
462	93	Jewel's Terrace Park	Cinnamomum camphora	X		X	Moderate	Walkway	Frequent	Probable	Medium	Somewhat Likely	Severe	Moderate								Walkway, lawn	Frequent	Probable	Medium	Likely	Severe	Moderate	
460	94	Jewel's Terrace Park	Cinnamomum camphora				Low																						
459	95	Jewel's Terrace Park	Cinnamomum camphora				Low																						
0	96	Jewel's Terrace Park	Cupressus sp.				Low																						
0	97	Jewel's Terrace Park	Prunus cerasifera				Low																						
458	98	Jewel's Terrace Park	Cedrus deodara	X			Moderate	Tennis courts, walkway	Frequent	Probable	Medium	Somewhat Likely	Significant	Moderate															
457	99	Jewel's Terrace Park	Calocedrus decurrens	X			Moderate	Tennis courts	Frequent	Probable	Medium	Somewhat Likely	Severe	Moderate															
0	100	Jewel's Terrace Park	x Chitalpa				Low																						
0	101	Jewel's Terrace Park	Pinus pinea				Low																						
456	102	Jewel's Terrace Park	Calocedrus decurrens	X			Moderate	Tennis courts	Frequent	Probable	Medium	Somewhat Likely	Significant	Moderate															
469	103	Jewel's Terrace Park	Pinus radiata				Low																						
0	104	Jewel's Terrace Park	Prunus persica				Low																						
0	105	Jewel's Terrace Park	Prunus persica				Low																						
0	106	Jewel's Terrace Park	Liriodendron tulipifera				Low																						
454	107	Jewel's Terrace Park	Calocedrus decurrens				Low																						
0	108	Jewel's Terrace Park	Quercus agrifolia				Low																						
0	109	Jewel's Terrace Park	Quercus palustris				Low																						
0	110	Jewel's Terrace Park	Acer rubrum				Low																						
0	111	Jewel's Terrace Park	Ginkgo biloba				Low																						



Jewel's Terrace Park Tree Locations Labeled By Tree

Risk Rating

- High (1)
- Moderate (6)
- Low (18)

0 20 40 80 120 160 Feet

Esri/NASA, NGA, USGS, FEMA, Google, California State Parks, Esri, HERE, Garmin, SafeGraph
Geotechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USDA