

Appendix D: **Biological Resources Supporting Information**

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D.1 - Database Search Results

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Walnut Creek (3712281))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<i>Anniella pulchra</i> northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
<i>Anomobryum julaceum</i> slender silver moss	NBMUS80010	None	None	G5?	S2	4.2
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Blepharizonia plumosa</i> big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
<i>Bombus caliginosus</i> obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
<i>Calochortus pulchellus</i> Mt. Diablo fairy-lantern	PMLIL0D160	None	None	G2	S2	1B.2
<i>Centromadia parryi ssp. congdonii</i> Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Extriplex joaquinana</i> San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
<i>Fritillaria liliacea</i> fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
<i>Helianthella castanea</i> Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
<i>Isocoma arguta</i> Carquinez goldenbush	PDAST57050	None	None	G1	S1	1B.1
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4	
<i>Lasthenia conjugens</i> Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
<i>Malacothamnus hallii</i> Hall's bush-mallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
<i>Masticophis lateralis euryxanthus</i> Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Oenothera deltoides ssp. howellii</i> Antioch Dunes evening-primrose	PDONA0C0B4	Endangered	Endangered	G5T1	S1	1B.1
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<i>Rana draytonii</i> California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<i>Stuckenia filiformis ssp. alpina</i> slender-leaved pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
<i>Viburnum ellipticum</i> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3

Record Count: 25



*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

Inventory of Rare and Endangered Plants



Plant List

6 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1B, 2B], FESA is one of [Endangered, Threatened], CESA is one of [Endangered, Threatened, Rare], Found in Quads 3812212, 3812211, 3812118, 3712282, 3712281, 3712188, 3712272 3712271 and 3712178;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Remove Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank	Photo
Arctostaphylos pallida	pallid manzanita	Ericaceae	perennial evergreen shrub	Dec-Mar	1B.1	S1	G1	 2014 Neal Kramer
Chloropyron molle ssp. molle	soft bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Nov	1B.2	S1	G2T1	 1992 Robert E. Preston, Ph.D.
Clarkia franciscana	Presidio clarkia	Onagraceae	annual herb	May-Jul	1B.1	S1	G1	



1999 Margo Bors

[Erysimum capitatum var. angustatum](#)

Contra
Costa
wallflower

Brassicaceae

perennial herb

Mar-Jul

1B.1 S1 G5T1



1995 Saint Mary's College of California

[Holocarpha macradenia](#)

Santa
Cruz
tarplant

Asteraceae

annual herb

Jun-Oct

1B.1 S1 G1



2009 Zoya Akulova

[Oenothera deltooides ssp. howellii](#)

Antioch
Dunes
evening-
primrose

Onagraceae

perennial herb

Mar-Sep

1B.1 S1 G5T1



2011 Zoya Akulova

Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 19 September 2019].

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Questions and Comments

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D.2 - Arborist Report

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August 16, 2018

Jesse Markman
JETT Landscape Architecture + Design
2 Theatre Square Suite 218
Orinda, CA 94563
jessem@jett.land

Re: Arborist Report for 85 Cleaveland Road, Pleasant Hill

Dear Jesse,

This arborist report addresses the proposed project at 85 Cleaveland Road. Per the City of Pleasant Hill's Tree Preservation Ordinance Chapter 18.50.110, the scope of work includes:

- Tag, identify and measure trees $\geq 3"$ in diameter. (DBH of multi-trunked trees is sum of diameters of each stem.)
- Note trees that are considered "Protected" per city ordinance, defined as:
 - Any native oak tree with a diameter of 9" or larger, measured at 4.5' above grade.
 - Any indigenous tree with a diameter of 9" or larger, including but not limited to:
 - Red alder (*Alnus oregona*), Bigleaf maple (*Acer macrophyllum*), California buckeye (*Aesculus californica*), Madrone (*Arbutus menziesii*), California bay (*Umbellularia californica*), Black walnut (*Juglans hindsii*), California sycamore (*Platanus racemosa*), or Elderberry (*Sambucus mexicana*). Refer to the California Native Plant Society list of trees indigenous to the Bay Area for other species.
 - A non-native tree with a diameter of 18" or larger (includes coast redwood, eucalyptus exempt)
 - Any tree shown to be preserved on an approved tentative map, development or site plan or required to be retained as a condition of approval or environmental mitigation measure.
 - Any tree required to be planted as a replacement for an unlawfully removed tree.
 - Any tree designated as a "heritage tree," defined as trees over 16" in diameter (must be enrolled in program).
- Identify dripline locations and tree numbers on site plan.
- Assess individual tree health and structural condition.
- Assess proposed improvements for potential encroachment.
- Based on proposed encroachment, tree health, structure, and species susceptibility, make recommendations for preservation.

Project Discussion

The site is currently developed with an uninhabited two-story commercial building, flanked to the north and south by residential complexes. An existing driveway and parking lot wraps around the north, east, and south sides of the building. Existing trees on the site consist of a row of mature eucalyptuses, struggling redwoods, liquidambars, and Italian cypresses. I also included in my inventory two off-site trees that may be affected by construction. The proposed project includes multi-story residential buildings with subterranean parking. A new driveway will extend parallel to the entire north property line. Due to the density of the development, all trees on the site will need to be removed.

It is my opinion that thirty-three (33) trees will need to be removed to accommodate the proposed project, three (3) of which are considered protected trees. The remaining two off-site trees can be retained given that the protection measures within this report are followed.

Assumptions & Limitations

This report is based on my site visit on 6/20/18, and the conceptual plans provided by JETT Landscape Architecture & Design. It was assumed that the proposed improvements and trees were accurately surveyed. Off-site trees were not surveyed and I approximately located them on the tree protection plan. The recommendations contained in this report may need to be revised once landscaping and engineering plans are available for review.

The health and structure of the trees were assessed visually from ground level. No drilling, root excavation, or aerial inspections were performed. Internal or non-detectable defects may exist and could lead to part or whole tree failures. Due to the dynamic nature of trees and their environment, it is not possible for arborists to guarantee that trees will not fail in the future.

Tree Inventory & Assessment Table

#s: Each tree was given a numerical tag from #1-22; some trees were not tagged and were assigned letters instead (e.g. off-site, dense brush, dead). Their locations are given in the tree protection plan.

DBH (Diameter at Breast Height): Trunk diameters in inches were calculated from the circumference measured at 4.5' above average grade.

Health & Structural Condition Rating

Dead: Dead or declining past chance of recovery.

Poor (P): Stunted or declining canopy, poor foliar color, possible disease or insect issues. Severe structural defects that may or may not be correctable. Usually not a reliable specimen for preservation.

Fair (F): Fair to moderate vigor. Minor structural defects that can be corrected. More susceptible to construction impacts than a tree in good condition.

Good (G): Good vigor and color, with no obvious problems or defects. Generally more resilient to impacts.

Very Good (VG): Exceptional specimen with excellent vigor and structure. Unusually nice.

Age

Young (Y): Within the first 20% of expected life span. High resiliency to encroachment.

Mature (M): Between 20% - 80% of expected life span. Moderate resiliency to encroachment.

Overmature (OM): In >80% of expected life span. Low resiliency to encroachment.

DE: Dripline Encroachment (X indicates encroachment)

CI: Anticipated Construction Impact (L = Low, M = Moderate, H = High)

PA: Project Arborist

#	Species	DBH	Health	Structure	Dripline N E S W				Age	DE	CI	Comments	Action
A-J	Italian Cypress (<i>Cupressus sempervirens</i>)	10, 8, 10, 11, 10, 11, 13, 10, 8, 7	F	G	2' radius				M	X	H	No tag, DBH estimated due to dense canopy. In proposed building.	Remove.
1	Sweet gum (<i>Liquidambar styraciflua</i>)	28	G-F	F	18	18	18	18	M	X	H	Protected tree. Slightly chlorotic foliage; slightly sparse canopy. Large secondary/scaffold limbs. Drought stressed. Massive surface roots, minor hardscape damage. 6' from proposed building, 3' from proposed entry.	Remove.
2	Sweet gum	29.5	G-F	P	15	15	15	15	M	X	H	Protected tree. Co-dominant trunks at 8' with significant included bark. Massive surface roots; moderate hardscape damage (repaired). Drought-stressed, chlorotic foliage. In proposed plaza.	Remove.
3	Sweet gum	18.5, 18	G-F	F	20	20	6	20	M	X	H	Protected tree. Co-dominant stems at 4'. Massive surface roots; hardscape damage repaired. Chlorotic, drought-stressed foliage. In proposed plaza.	Remove.
4	Eucalyptus (<i>Eucalyptus</i> sp.)	47.5	F	P	10	5	10	15	M	X	H	Cracking curb. Overpruned, poorly structured. In proposed driveway.	Remove.
5	Eucalyptus	32.5	P	P	10	10	10	10	M	X	H	Cracking curb. Overpruned, poorly structured. Within 1' of proposed driveway curve.	Remove.
6	Eucalyptus	43.5	F	P	18	20	20	20	M	X	M-H	Pushing curb out. Overpruned, poorly structured.	Remove.
7	Eucalyptus	31.5	G-F	P	15	15	15	15	M	X	M-H	Overpruned, poorly structured.	Remove.
8	Eucalyptus	19.5, 14	F	P	20	20	20	20	M	X	M-H	Cracking curb. Overpruned, poorly structured.	Remove.
9	Eucalyptus	18, 17	F	P	20	20	20	20	M	X	M-H	Cracking curb. Overpruned, poorly structured.	Remove.
10	Eucalyptus	24	G-F	P	12	12	12	12	M	X	M-H	Cracking curb. East trunk has 10' tall scar originating from trunk removal. Overpruned, poorly structured.	Remove.
11	Eucalyptus	19, 17.5	G-F	P	20	20	20	20	M	X	M-H	Pushing curb out. Overpruned, poorly structured.	Remove.
12	Eucalyptus	23	G-F	P	15	15	15	15	M	X	M-H	Overpruned, poorly structured.	Remove.

#	Species	DBH	Health	Structure	Dripline				Age	DE	CI	Comments	Action
					N	E	S	W					
13	Ironbark eucalyptus (<i>Eucalyptus sideroxylon</i>)	24	F-P	F	10	10	20	20	M	X	M-H	Sparse canopy. Cracking curb. Large leader removed from north side.	Remove.
14	Eucalyptus	21.5	F	F-P	10	20	20	10	M	X	M-H	Sparse canopy.	Remove.
14B	Eucalyptus	11, 20	Dead							X	M-H	No tag.	Remove.
15	Eucalyptus	20, 26	F	P	10	18	18	18	M	X	M-H	Pushing curb out. Overpruned, poorly structured.	Remove.
16	Eucalyptus	15.5	F	P	10	10	10	10	M	X	M-H	Overpruned, poorly structured.	Remove.
17	Eucalyptus	16.5, 28	F	P	15	15	15	15	M	X	M-H	Overpruned, poorly structured.	Remove.
18	Redwood (<i>Sequoia sempervirens</i>)	6	F-P	G	5	5	5	5	Y	X	M-H	Drought stressed. 11' from proposed building. Likely to be impacted by shoring of underground garage.	Remove.
19	Redwood	4.5, 2	F-P	G	2	2	2	2	Y	X	M-H	Drought stressed. L11' from proposed building. Likely to be impacted by shoring of underground garage.	Remove.
20	Redwood	7.5	F-P	G	5	5	5	5	Y	X	M-H	Drought stressed. 11' from proposed building. Likely to be impacted by shoring of underground garage.	Remove.
21	Redwood	7	G-F	G	6	6	6	6	Y	X	M-H	Minor drought stress. 17' from proposed building. To be removed. Likely to be impacted by shoring of underground garage.	Remove.
22	Redwood	9, 6.5	P	F	8	8	8	8	Y	X	H	Co-dominant trunks. Sparse canopy, significant drought stress. In proposed building.	Remove.
22B	Redwood	20	G	G	15	15	15	15	M	X	M-H	Protected tree. Neighbor's tree, no tag, diameter estimated. About 1' from fence. May require clearance pruning. 12' from proposed building.	Arborist on site during grading within dripline. Design landscaping to minimize root impact.
22C	Raywood ash (<i>Fraxinus angustifolia</i>)	18	F	F	25	15	15	15	M	X	L	Protected tree. Neighbor's tree, no tag, DBH estimated. Top dieback. 18' from proposed building.	If needed, coordinate pruning through project arborist.

Trees that will need to be removed: A-J, 1-22, 14B (dead eucalyptus); total of 33 trees – three are protected

Trees to be saved that will be subjected to dripline encroachment: 22B, 22C

Discussion

All trees on the property will need to be removed due to high anticipated encroachment or poor condition. The Italian cypresses are located in the proposed buildings, while the liquidambar are located within several feet of a proposed building or in the proposed plaza. High anticipated encroachment requires removal of the trees. Additionally, the redwoods along the east property line (Figure 1) may be subject to moderate encroachment from excavation of the subterranean parking garage. Although young redwoods would technically be highly resilient, these trees are drought-stressed and do not contribute significantly to existing canopy cover. I recommend removing and replacing the redwoods as a more cost effective approach to increasing tree canopy.

The proposed driveway is roughly in the same area as the existing driveway; the widening of the entrance requires removal of two trees. However, I recommend removing the entire row of eucalyptuses due to their structure (Figure 2). Eucalyptuses are notorious for limb failure, more so when improperly pruned as were these trees. Nearly every eucalyptus was topped at 20', with lower foliage removed to the same height. All large branches growing over the north property line were removed for clearance. Since the canopies have been significantly raised, the trees only provide minor screening for the second story. Since they are not protected trees, I recommend removing them and replacing them with smaller-statured plants appropriate for the narrow planting strip.

Protection efforts thus should be focused on the neighbor's trees. Of primary concern is the large redwood (22B, Figure 3) located 1'-2' from the south property line. Proposed grading and landscaping plans were not yet available, but I anticipate there will be dripline encroachment beyond the proposed building footprint. An arborist shall be on-site during grading within its dripline to prune large roots (if needed) and provide additional recommendations. Landscaping improvements shall be installed by hand to minimize damage to large roots. Supplemental irrigation may be necessary during and after construction to mitigate the impacts of root loss. Additionally, clearance pruning may be required for the Raywood ash (22C).

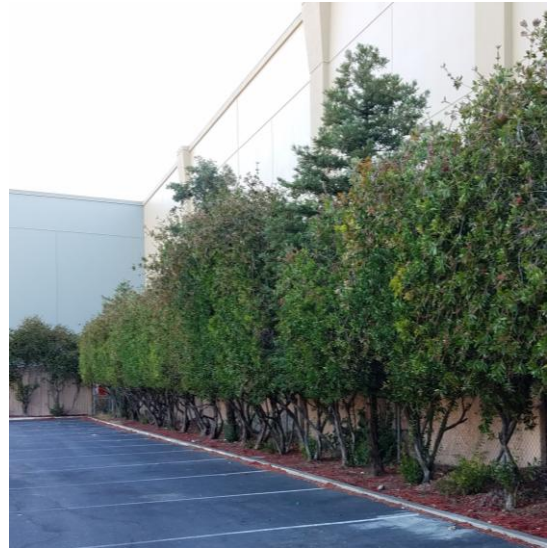


Figure 1. The young redwoods along the east property line are drought stressed and provide low benefits to the property.



Figure 2. The row of eucalyptus trees along the north property line have nearly all been topped and excessively raised. Since they are not protected trees, I recommend replacing them with plantings more appropriate to the location.

Recommendations (to be printed on site plans)

- Remove trees #A-J, 1-22, 14B (dead eucalyptus; 33 trees).
- If needed, clearance pruning of the neighbor's trees (#22B, 22C) shall be performed by personnel certified by the International Society of Arboriculture (ISA). All pruning shall adhere to ISA and American National Standards Institute (ANSI) Standards and Best Management Practices.
- Should any damage to the trees occur, the contractor shall promptly notify the PA to appropriately mitigate the damage.
- During landscaping installation, avoid all fill work, grade changes, and trenching within driplines unless it is performed by hand.
- Irrigation pipes shall be threaded under or through large roots without damaging them.
- Supplemental irrigation may be needed during or after construction for tree #22B.

Thank you for the opportunity to provide this report, and please do not hesitate to contact me if there are any questions or concerns.

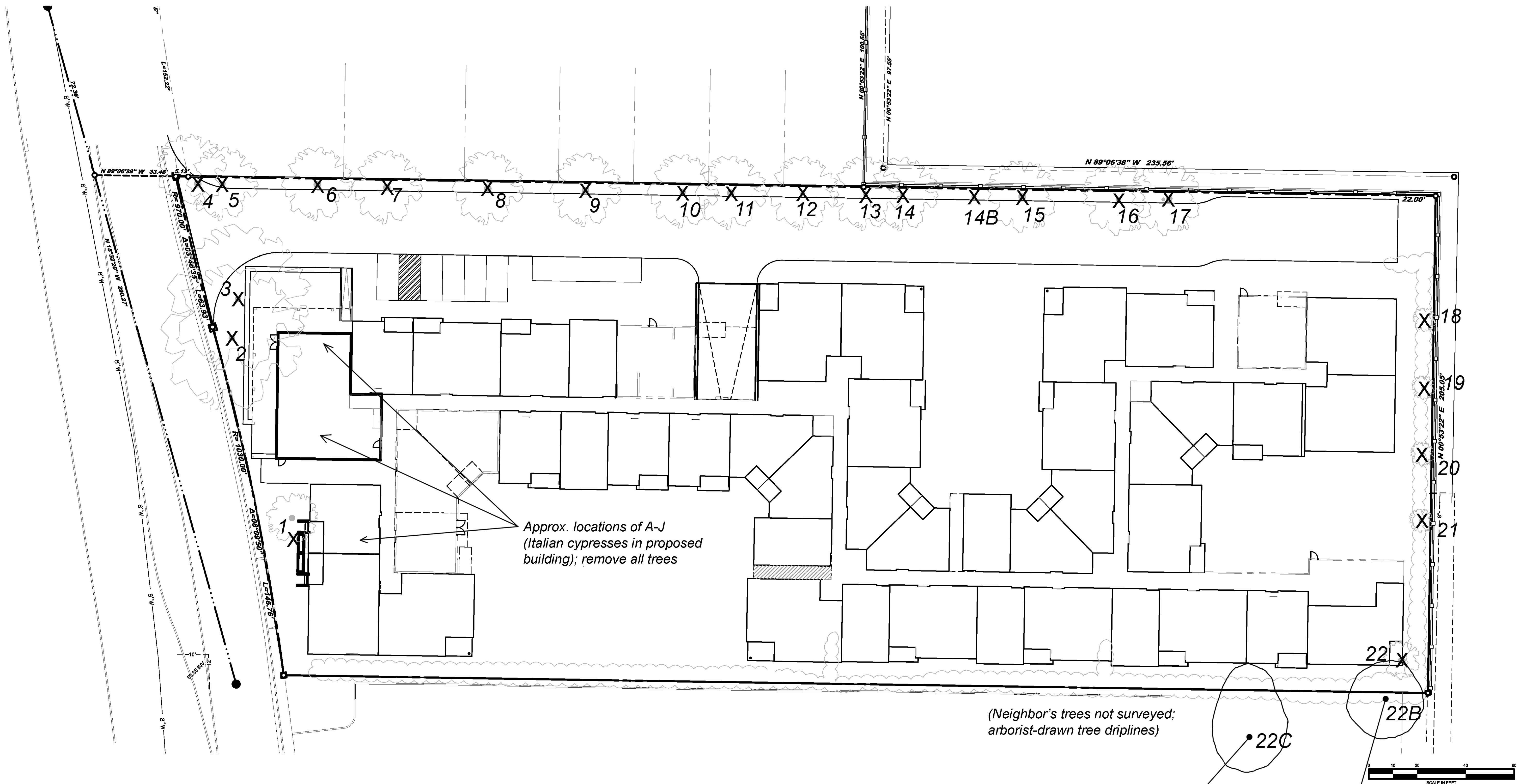
Sincerely,



Jennifer Tso
Certified Arborist #WE-10270A
Tree Risk Assessor Qualified



Figure 3. The neighbor's redwood was not surveyed but is located close to the property line. Root disturbance shall be minimized.



TREE PROTECTION PLAN

By: Jennifer Tso

Certified Arborist #WE-10270A

Traverso Tree Service, Inc.

August 16, 2018

Arborist shall be on-site during grading within tree dripline. During landscaping, avoid fill work, grade changes, and trenching within dripline unless performed by hand. Pipes shall be threaded under or through large roots without damaging them.

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